2025
Public Safety
Needs Assessment
Preliminary Findings

Prepared by the:

City of Fresno
Fire Department

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EXECUTIVE SUMMARY

The 2025 Fresno General Plan provides a substantially revised and updated strategy to address current issues and deficiencies, reinforce existing community assets, and improve the quality of life of the community as a whole. The Plan is intended to serve as a guide to enable government (at all levels), community groups and private enterprise to make quality decisions in respect to service delivery in the future. Strategic use of community resources in a manner that will advance progress toward a common vision is an intricate part of the 2025 General Plan.

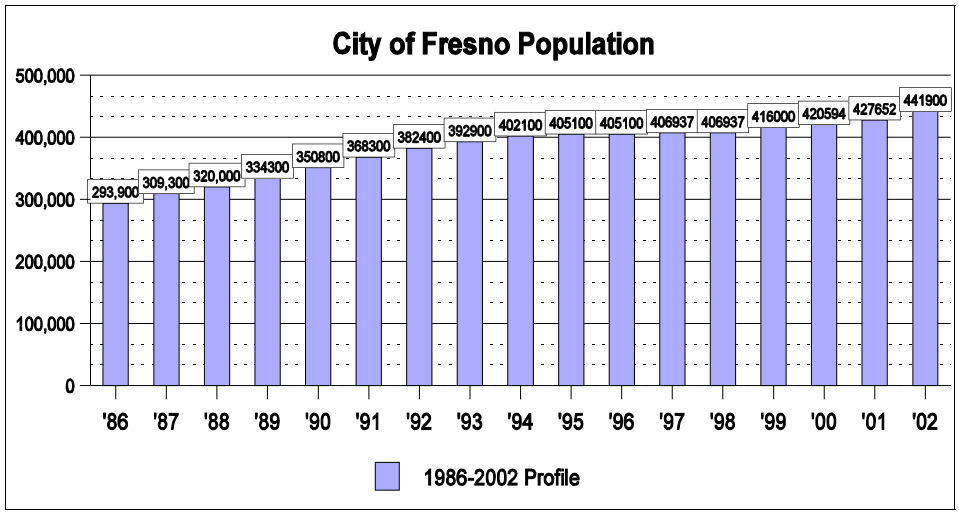


Exhibit 1 *Source: Statistics Reported to the US Department of Justice, Uniform Crime Report*

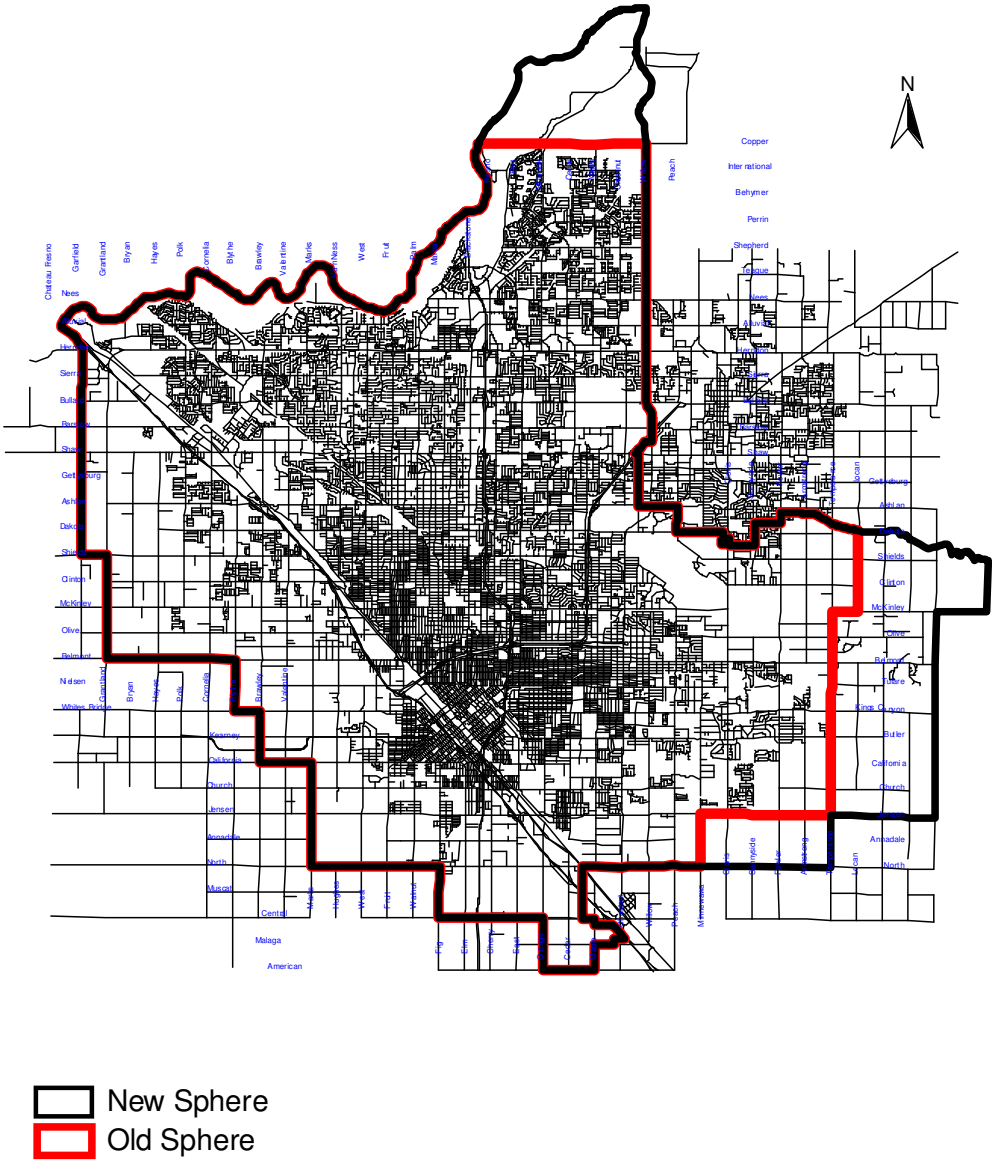
The 16 years between 1986 to 2002, the city of Fresno population increased from 293,900 to 441,900 (See Exhibit 1). This represents a 50.3 percent increase in population with an associated 3.14 percent growth rate. If this growth rate remains consistent, the city of Fresno's Population in 2025 could be over 800,000. In addition, the city of Fresno's existing boundaries incorporate 104 square miles. By 2025 that number could increase to 124 square miles, an approximate 20 percent increase.

Revitalization and enhancement of the established urban core is a major focal point. However, existing communities, new growth areas, and the number of mid-rise and high-rise corridors need to be factored when developing a comprehensive Public Safety Master Plan for the next 22 years.

The 2025 Public Safety Needs Assessment Report for the Fire Department are preliminary findings to address the 2025 Fresno General Plans purpose and vision. The current and future Fresno Sphere of Influence has been considered while identifying the needs for the Fire Department through the year 2025 (See Exhibit 2, page 2).

EXHIBIT 2

City of Fresno
Sphere of Influence
2025



Over the last two years, the Fresno City Council and Mayor have made difficult financial decisions to invest into the Fresno City Fire Department. The Department, while encouraged and appreciative of these bold decisions, has identified additional needs to meet industry standards, and to meet the demands of a growing city.

The 2000/2001 Fresno County Grand Jury Final Report stated; "*The City of Fresno has highly trained and motivated firefighters. The Fresno metropolitan area has never had a major incident, accident or emergency situation that led to a catastrophe. A major fire would stretch all of the local fire departments to capacity.* ***The rationale that it has worked well for the last twenty years, therefore it will be adequate for the next twenty years, is not sufficient***."[1] The challenge today is to develop a framework based upon comparative analysis, industry standards, and best practices to create a workable strategic vision for the City's fire emergency service.

1. STANDARDS OF RESPONSE COVERAGE

A "standard of cover" policy describes the deployment "coverage" for a given community or area. A critical element in the assessment of any Fire/EMS delivery system is the ability to provide adequate resources for anticipated fire combat situations and medical/rescue emergencies. Each fire/EMS emergency requires a variable amount of staffing and resources to be effective. Properly trained and equipped fire companies must arrive, deploy, and attack the fire within specific time frames if successful fire ground strategies and tactical objectives are to be met. The same holds for rescue operations, major medical emergencies, and other situations that require varying levels of resources.

Controlling a fire before it has reached its maximum intensity requires a rapid deployment of personnel and equipment in a given time frame. The higher the risk, the more resources needed. For example, more resources are required for the rescue of persons trapped within a high-risk building with a high-occupant load, than for a low-risk building with a low-occupant load. More resources are required to control fires in large, heavily loaded structures than in small buildings with limited contents. Therefore, creating a level of service requires making decisions regarding the distribution and concentration of resources in relation to the potential demand placed upon them by the level of risk in the community. Two factors are relevant to every emergency; the first is response time and the second is staffing.

WHY ARE RESPONSE TIMES AND STAFFING LEVELS IMPORTANT ?

- **Flashover** can occur within 6-10 minutes of a fire. If Fire apparatus and personnel are on scene and can intervene prior to flashover occurring, property loss is decreased; risk to civilian and firefighting personnel is reduced (discussed in detail on pages 18-22).

- **Survivability: Brain death** starts to occur at 4 minutes in a cardiac or respiratory arrest emergency. Quick intervention will result in fewer deaths (discussed in detail on pages 27-28).

- **Property Loss** in the city of Fresno, due to fires, has increased substantially over the last five years from 10.8 million to 17.8 million in 2002. Per capita loss has grown from $26.30 to $40.20, representing a 52 percent increase. Ultimately this translates into lost tax revenue for the City, business disruption, increased insurance rates, and devastating hardships on our citizens.

2. CURRENT STANDARDS AND ORDINANCES AFFECTING RESPONSE TIMES

- **NFPA 1710 states**; " ...fire departments shall establish a four-minute response time for the first due engine company and a eight-minute response time for a full alarm assignment."[2] **Currently, the Department arrives within 5-1/2 minutes, 65 percent of the time.**

- **The City of Fresno Municipal Code** states that all residential Urban Growth Management (UGM) development will not exceed a 3-5 mile (depending on building separation) running distance from any existing fire station. Currently, some of our stations do not meet this requirement.

- **Fire Station locations are either located too far apart** or the companies are unavailable due to being on another call; then units are dispatched from stations in other areas to respond to the call and fail to meet the four-minute response time requirement. The Department is researching current, and future station locations, and providing additional deployment strategies to meet the four-minute response service level objective (See Exhibit 7 on page 26).

3. STAFFING REQUIREMENTS

- **OHSA 29 CFR 1910 "2 in 2 out rule"** is a California law that requires two firefighting personnel to be outside a structure prior to two other firefighters making entry into a fire building. The Fire Department currently has three personnel on each apparatus, which requires two apparatus to arrive at a structure fire prior to making entry.

- **A 4th firefighter on each apparatus would ensure compliance** with OSHA 29 CFR 1910 and NFPA 1710.

- **A typical residential structure fire requires a minimum** of 15 firefighters on scene

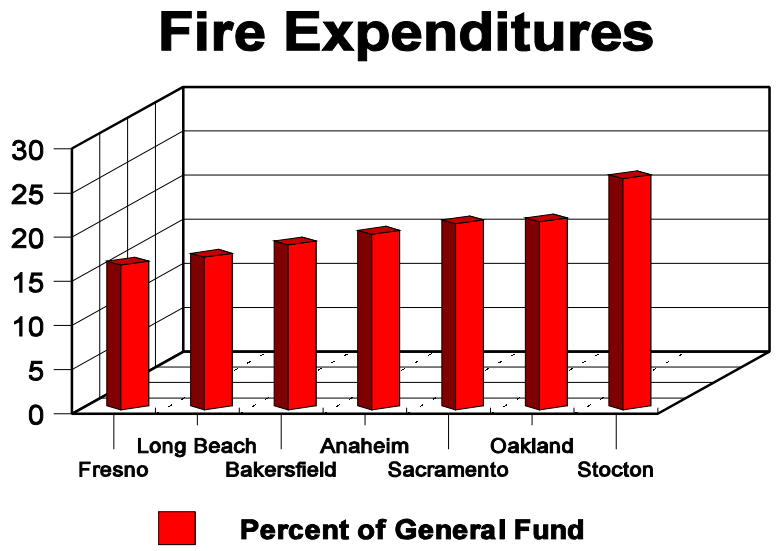
to control the incident in a safe and effective manner. To achieve that number of firefighters at an emergency, would require over 1/4th of the City's fire apparatus. If one or two other significant incidents occur during this time, the Department may not be able to manage the emergencies and respond timely to other emergencies.

- **National industry comparisons show** a ratio of firefighters per 1000 population to be 1 to 1.5.

- **The City of Fresno currently has one of the lowest** firefighter to population ratio, at .58 firefighters per 1,000 population.

5. FUNDING

- **The Fire Department ranks last among peer cities in funding**. The Weber Report stated; "...the Fresno Fire Department consumes less of the General Fund than the peer city median and that the support for fire services in Fresno is the lowest of all the peer cities on a per capita basis."[3] (See Exhibit 3)



(Exhibit 3)
Below is a **summary** of the major service enhancements and projected costs, as defined by the

preliminary needs assessment (p. 37-60).

Immediate:		**Cost: (millions)**
–	Build Station 15 (Southeast Fresno)	2.7
–	Add a 4th person to every truck company (Cost includes personnel and equipment)	1.4
–	Install two transmitters for communications	3.0
–	Replace outdated apparatus	5.6
–	Add six Rapid Response-2 person Rescue Units	4.7
–	Make improvements to fire stations	4.5
–	Staffing for Station 15	1.7
–	Construct a new Fire Headquarters	4.6
–	Construct a new Training and Fire Shop Facility	6.0
–	Install power generators at stations	1.2
2006 - 2010		
–	Replace outdated apparatus	5.2
–	Add a 4th person to every engine company	4.4
–	Add two new truck companies (Cost includes staffing, equipment, apparatus)	4.4
–	Add two 6-person Rescue companies	4.6
–	Construct Station 18 (Southwest Fresno) and relocate Station 16 (West Fresno)	7.1
–	Staffing for Station 18	2.0
2011-2015		
–	Construct Station 17 (Northwest Fresno)	3.9
–	Staffing for Station 17	2.2
–	Construct Station 19 (South Fresno)	4.2
–	Replace outdated apparatus	5.0
2016 - 2020		
–	Staffing for Station 19	5.2
–	Replace outdated apparatus	12.1
–	Construct Station 20 (Southeast Fresno)	4.6
–	Staffing for Station 20	2.6
2021 - 2025		
–	Replace three aerial trucks	4.4
–	Replace one HazMat vehicle	1.0
–	Replace Rapid Response Units	1.8

PURPOSE OF 2025 PUBLIC SAFETY NEEDS ASSESSMENT PRELIMINARY FINDINGS REPORT

This 2025 Public Safety Needs Assessment Preliminary Findings Report for the Fire Department provide policy makers an overview of where investments (as identified by the Fire Department) need to be made in the future. The challenge to the Fresno City Fire Department has been to keep pace with growth, increased calls for service, technology, job-related diversity, improved customer service, all within continued budget constraints. The objective of this report is to identify the present and future needs of the Fire Department, while meeting the communities expectation for a quality level of emergency services. That is best accomplished by evaluating the following areas:

1. Background
2. Population Growth
3. Community Risk Assessment
4. Summary of Fire Service Needs and Costs, as developed by the Fire Department

The need for this plan is articulated in the executive summary of the Mayor's Council of Economic Advisors Task Force Report (Weber Report). The Weber Report states that, *" recent Fresno trends in expenditures for Public Safety relative to revenue trends, if un-managed, would cause the entire General Fund to be consumed by Public Safety expenditures by the year 2008."* [4]

PROJECT METHODOLOGY

The Fresno Police Department, Fire Administration and Prevention Divisions, and the Finance and Budget Analysts assigned to the Fire Department all assisted in providing data used in this report. Cooperation from the identified peer cities and other national survey and models were also an integral tool in assessing industry "best practices," in a means to develop the assessment of need.

Sources for data collection include:

Historical Trends. In most cases, 20 years of data was collected from 1982 through 2002 to look at population growth, incident responses, staffing levels, and costs.

Peer Comparison. Present day comparisons were also made with Bakersfield, Modesto, Long Beach, Santa Anna, Anaheim, Stockton, Riverside and Sacramento, as was done for both the Macias and Weber Reports, to compare present practices, staffing.

Phoenix Study. In 2000 the Phoenix Fire Department conducted a National Survey on Fire Department Operations, which included staffing levels and response times from over 257 fire departments in the United States and Canada.

Firefighter to Population Ratios were determined nationally, from available research and peer city data, to compare Fresno's staffing levels.

Present Fire Station locations were reviewed in relation to recommendations made in other City of Fresno studies and response times to emergency incidents were considered to determine future needs relative to growth patterns and population densities. (See pages 25-28).

Document Review: The following documents were reviewed and referenced in this report.

- Macias Consulting Group, Ltd., Operational Review of the Fresno Fire Department Final Report,2001
- City of Fresno 2025 General Plan, 2002
- Mayor's Council of Economic Advisors Task Force Report,2003
- Commission on Fire Accreditation International Fire & Emergency Services Self Assessment, Fifth Edition
- Citygate Associates, LLC., Countywide Fire Protection Study for Fresno County, 2003
- ISO (Insurance Services Office)
- OSHA 29 CFR 1910 laws
- City of Fresno Public Safety Master Plan, Police Department
- City of Fresno Municipal Code
- Fresno County Emergency Medical Policies
- Western City, League of California Cities, August 2003
- Phoenix Study, National Survey on Fire Department Operations, 2000

BACKGROUND

Over the years, the Fire Department has gone through several transformations in a continuous effort to become more efficient and cost effective. In 1970, the Department consisted of 258 sworn firefighting personnel. Fresno had a population of 165,700 within 41.8 square miles. This equated to 1.56 sworn firefighting personnel per 1,000 population. **In 1980**, the Fire Department **peaked in the number of sworn firefighting personnel at 303**, serving a population of 216,500 and covering an area of 65 square miles.

For the past 20 years, primarily due to budget constraints, the **Fire Department has continually reduced its staffing** while the city of Fresno grows in population, square miles, and urban development. As the service area and population has grown, so to have the calls for service, increasing from approximately 20,000 in 1980 to almost 30,000 in 2002. **In 2002, the Fresno City Fire Department was ranked 72nd out of the top 150 busiest fire departments in the United States.**

The Fresno City Fire Department provides all risk management services ranging from fire prevention, fire suppression, hazardous material mitigation, rescue, and emergency medical care. Shifts in the city's demographics, population densities, homeland security, and other associated issues warrant changes in funding and deployment strategies.

Today, emergency services are provided by 16 fire stations strategically located throughout the city, via 16 engines, 5 ladder trucks, and 2 battalion chiefs. As our community changes, so to does the role of the fire service. The Fresno Fire Department has expanded over the years adding many other activities to its arsenal of services. These duties; public education, fire code and life safety inspections, hydrant testing and maintenance, Global Information Systems Analysis, communications, and customer service activities must all be completed, in addition to responding to calls for service and complying with Federally mandated training requirements.

Most recently the **Fresno City Council and Mayor have made a positive impact** on improving the Department by hiring 12 new firefighters (2003,) bringing the total number of firefighting personnel to 263. They have also committed to the relocation and building of Station 21(projected 2004) and to building and staffing new Station 15 in southeast Fresno (projected 2004).

In the **Mayor's Council of Economic Advisors "Meeting the Challenge" Task Force Report (Weber Report)**, one of the benchmark findings was; "*the Fresno Fire Department has the lowest number of FTEs per 100,000 population, some* ***40% below the peer city median***. *This lower support for City Fire Services has an impact on fire insurance rates for Fresno residents, which are already relatively high and could go higher if the situation is not corrected. The low number of FTEs per capita also forces the Fire Department to make inefficient use of its equipment fleet in order to remain in compliance with OSHA standards. Further, the condition of Fresno's fire stations and equipment suggest a deferred maintenance condition that must eventually be addressed. In recognition of this situation, the Fresno Fire Department received a larger increase in its FY2003 budget than any other City department, but there is a long way to go before the situation is fully addressed."*[5]

Further perspective on higher insurance rates and compliance with OSHA standards may be helpful in fully understanding the needs of the Department.

In 1980, the Fresno City Fire Department was rated a "Class 1" Fire Department by the Insurance Services Office (ISO). In 1993 ISO surveyed the Department again and we were reclassified to a "Class 4" rating, which we currently hold today. This rating is a combination of elements in the City's fire suppression system, which include; fire alarm dispatching and receiving, fire department (number of personnel, apparatus, station location, and training,) and finally the Fresno water supply system. These ratings are generally grouped (1 through 6) for residential and (1 through 4) for commercial properties. We need to be very careful not to let our rating slip to a 5 classification as this would cause an increase in insurance premiums for commercial properties. An incentive, beyond insurance savings, for improving the City's Public Protection Classification is an incentive in municipal economic development. Business and industry often examine the City's PPC in evaluating sites for new business, and may be a factor considered in expansion or relocation.

OSHA 29 CFR 1910 is a Federal law that requires firefighters to have a minimum of four personnel at the emergency prior to entry being made if it is not a rescue situation; *"...prior to entry being made into a structure that is immediately dangerous to life and health (IDLH) there must be a minimum of two firefighting personnel working inside of a structure as a team and a minimum of two firefighting personnel be on standby outside the structure to provide assistance or perform rescue.*"[6] With this law, under the Fire Department's current staffing levels, we must respond more apparatus to incidents to meet minimum requirements, hence the Weber Report's previous statement on inefficient use of equipment.

An article from Western City, League of California Cities, written by Timothy Lynch, discusses the use of a peer city comparisons using a bench marking exercise to measure the effectiveness and relative efficiency in delivery of services. This study conducted in the city of Fresno found; ***"virtually every Fresno city department was shown to be "leaner" (with the exception of the Police Department) than the median of our peers."***[7] This reinforces how the Fire Department has continually done more with less.

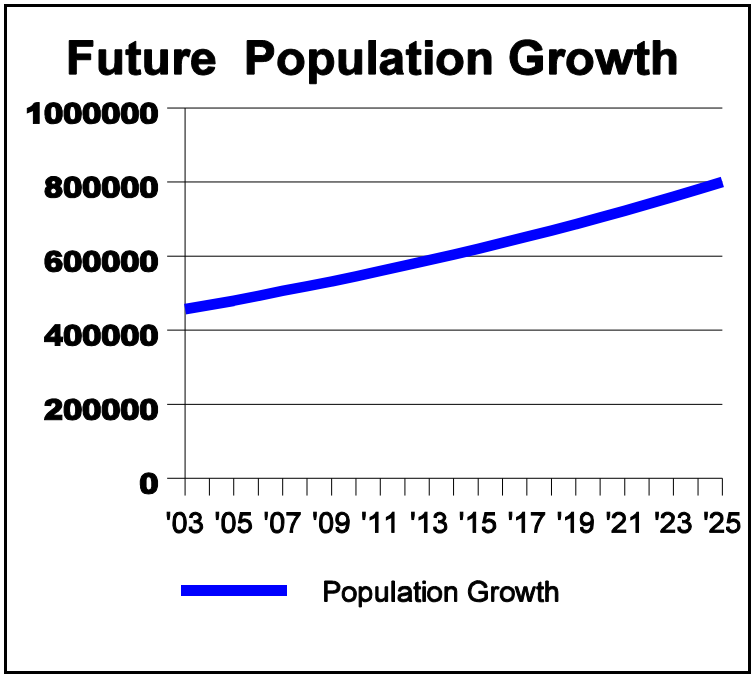
Meeting the community's expectation for delivery of service, based on Industry Standards and cities of similar size, will require additional funding in the future.

POPULATION GROWTH

POPULATION GROWTH PROJECTIONS

In 2000, the Central California Futures Institute (CCFI) affiliated with California State University, Fresno, published a report entitled "Population Forecast for Fresno County to 2025" (dated April 2000). This report has been generally accepted as an accurate portrayal of expected growth within Fresno County. In this report, CCFI, provides a prudent forecast for a modest average annual population growth rate of 1.9 percent for Fresno County between the years 2000 and 2025.

However, current figures in 2003 suggest that the annual growth rate, for the city, to be closer to 3.14 percent. If this growth rate were to remain constant, then the city of Fresno's population would grow at a rate faster than that of Fresno County, resulting over 800,000 residents. This results in a significantly higher population projection for 2025.



POPULATION DENSITY

The 2002 population figure divided by the existing city area (104.0 miles) establishes a population density of 4,312 people per square mile. By 2025 that number increases to 6,454 people per square mile.

Population Density			
Year	Sq. Miles	Population	Density
2002	104	448,453	**4,312**
2025	124	800,317	**6,454**

At the rate of population growth indicated, there are three possible scenarios:

1. The city could annex sufficient acreage to maintain the current population density in 2025. This would require the city boundaries to expand to185.6 square miles by annexing sufficient acreage (adding an additional of 80.7 miles to the current 104.1).

2. Distribute the anticipated population growth over the sphere of influence (124 square miles), which would require an additional 20 square miles of city in which fire services would be delivered. The increased population density of 6,454 people per square mile. This scenario would raise the population density by 24.5 percent on average over existing levels.

3. Add the 2025 increased population to the existing city boundaries (104.0 square miles) to create a population density of 7,563 people per square mile. This represents an increase in population density of 43.5 percent over current levels.

The Fire Department currently has 16 fire stations serving the 104 square miles. By adding an additional 20 square miles to the area of the city, the Fire Department would be required to add four to six additional stations as a means of keeping response times to accepted industry standards. By adding the additional area to existing fire stations, coverage response times would be increased, creating additional and unnecessary risk to the residents of Fresno and an unacceptable level of service based on industry standards.

The 2025 General Plan has outlined the impact that will result in an increased demand for service from the Fire Department. Calls for service will increase proportionally to population and require the Department to cover greater distances within the sphere of influence.

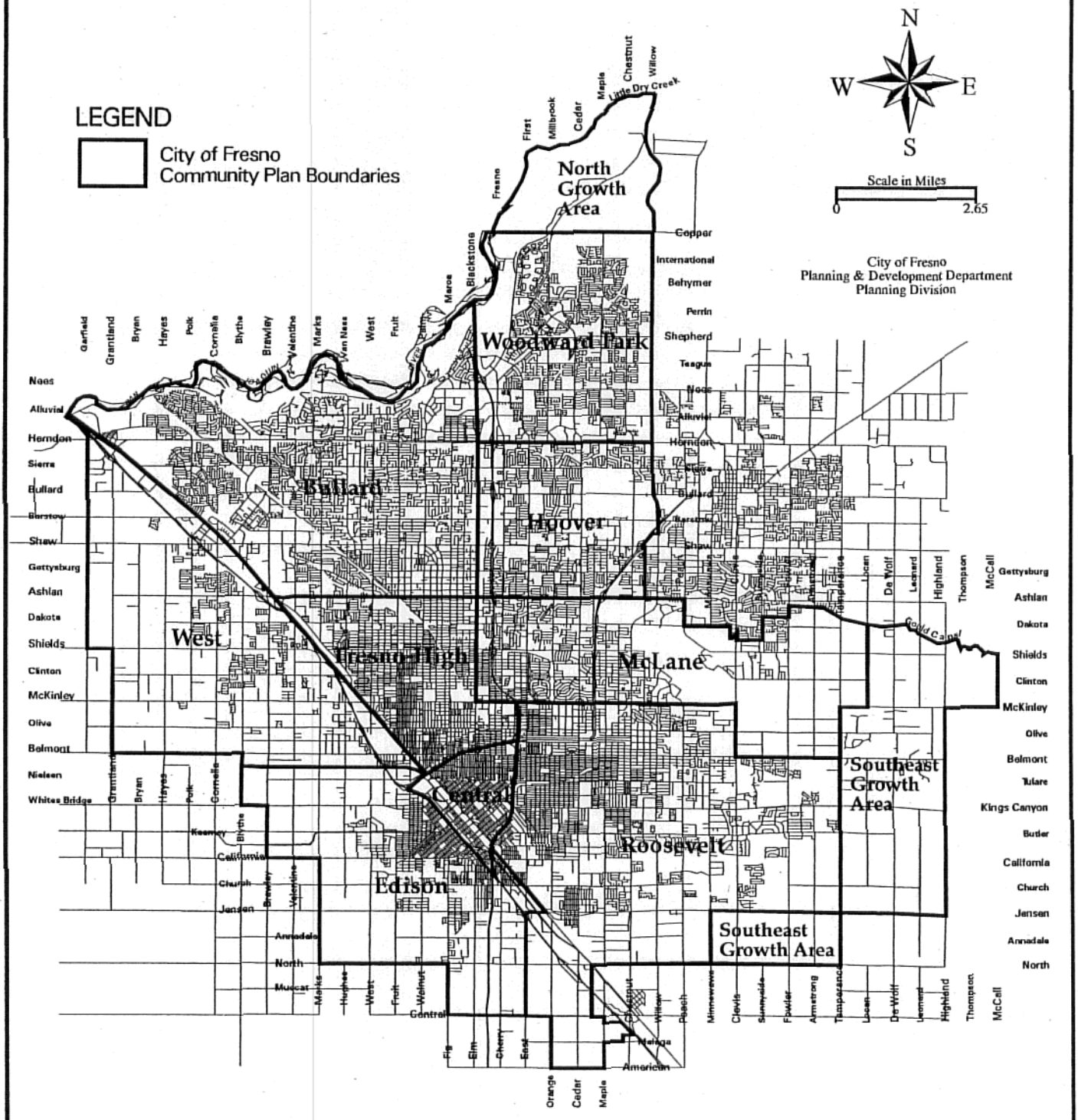
IDENTIFIED DEVELOPMENT PATTERNS

The 2025 General Plan contains implementation and regional cooperation measures " that strive to achieve the necessary consensus regarding the primary land use and resource management issues affecting the quality of life experienced within the metropolitan area and surrounding region."[8] The 2025 General Plan calls for balanced growth including urban growth areas to the North and the Southeast that would accommodate approximately 10,000 and 55,000 people, respectively (See Exhibit 4, page 14). It further states:

" *The 2025 General Plan also intensifies strategies focusing upon the revitalization and enhancement of the established urban core. Particular emphasis has been placed upon new strategies to balance growth and development around a reinvigorated traditional downtown. These strategies address thirteen performance measures (contained in the Urban Form Element-Land Use/Infill Development topic) that have been identified for the urban core communities. These performance measures include development of substantial civic or public facilities (regional medical center phase I, downtown stadium), construction of 500,000 square feet of office space (either private or governmental/non-profit), increasing employment by 3,000 employees, addition of new off-street parking for 6,000 vehicles, rehabilitation of 1,000 dwelling units and construction of 1,000 new infill dwelling units (within the center city area bound by Ashlan, Chestnut, Jensen and West Avenues)."*[9]

EXHIBIT 4

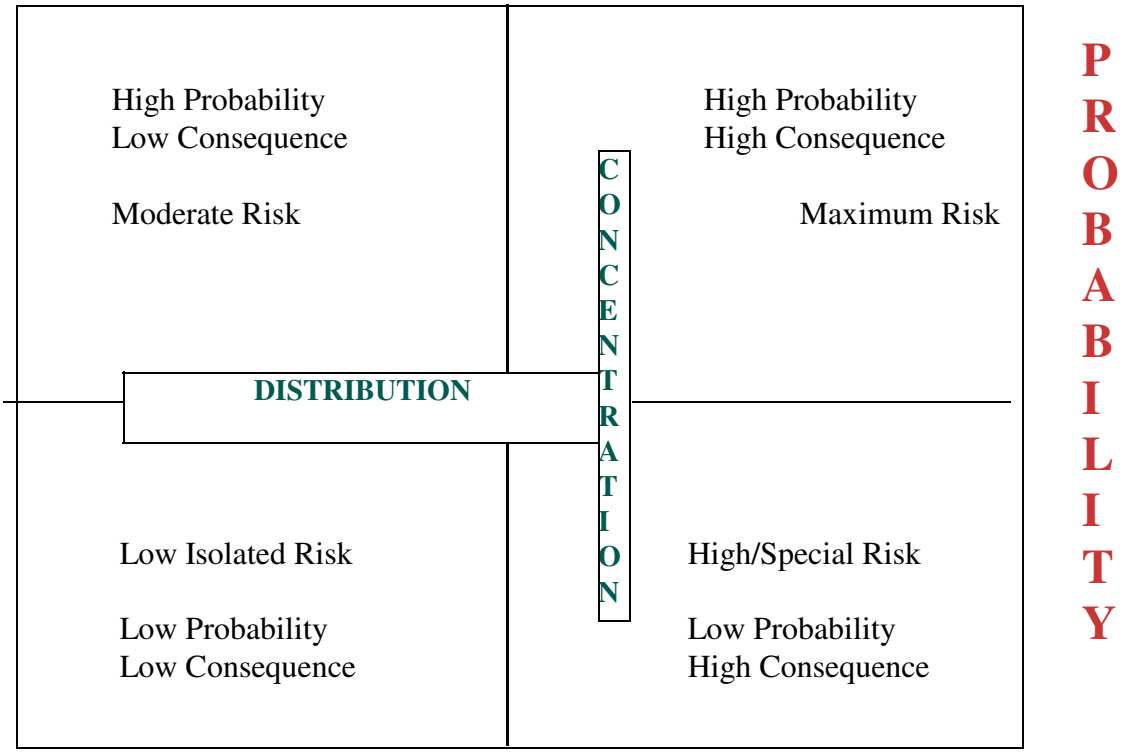
City of Fresno
Community Plan Boundaries Map



COMMUNITY RISK ASSESSMENT – FIRE SUPPRESSION

The evaluation of fire risks must take into account both the frequency and severity of fires and other significant incidents. Determining risk by analyzing the real world factors in the service area is essential to the development of a workable twenty-year fire/emergency medical services plan.

The following diagram illustrates the process of risk assessment, which weighs the probability an event will occur again and the consequences of that event. We have divided risk assessment into four quadrants. Each quadrant imposes different requirements for commitment of resources in the service area.



CONSEQUENCES

This diagram illustrates four possible relationships between structures or hazardous conditions and the concentration and distribution of resources:

Low Probability, Low Consequences
Low Probability, High Consequences
High Probability, Low Consequences
High Probability, High Consequences

Key Points: *Distribution:* the number of resources placed throughout the City.
Concentration: the number of resources needed in a given area/community. This varies, increased risk and call volume equals increased concentration of resources.

CONSEQUENCES

The risk assessment for the service area would include for example, defining the differences between a detached single-family dwelling, a multiple-family dwelling, an industrial building and a high-rise, by placing each in a separate category of risk. For a medical emergency, a single-patient incident would be compared with a multi-casualty situation.

There are many factors that make up risk: the ability of occupants to take self-preserving actions, construction features, built-in fire protection, available water supply, nature of the occupancy or its contents.

Therefore, defining community risk is essential to determining the level of service the Fire Department should provide. The level of service should be based on the Department's ability to handle the types and sizes of emergencies that are reasonably expected to occur now and in the future.

OCCUPANCY RISK ASSESSMENT

Our service area has a wide range of potential risks. There is an inverse relationship between risk and frequency. Daily events are usually found in the routine risk category, and less frequent events are in the highest risk levels. If the risk management system is working, a truly major loss should be an extraordinary event. In most cases, the majority of losses occur in the smallest percentage of emergencies. Fire incidents that become a significant event usually have experienced flashover.

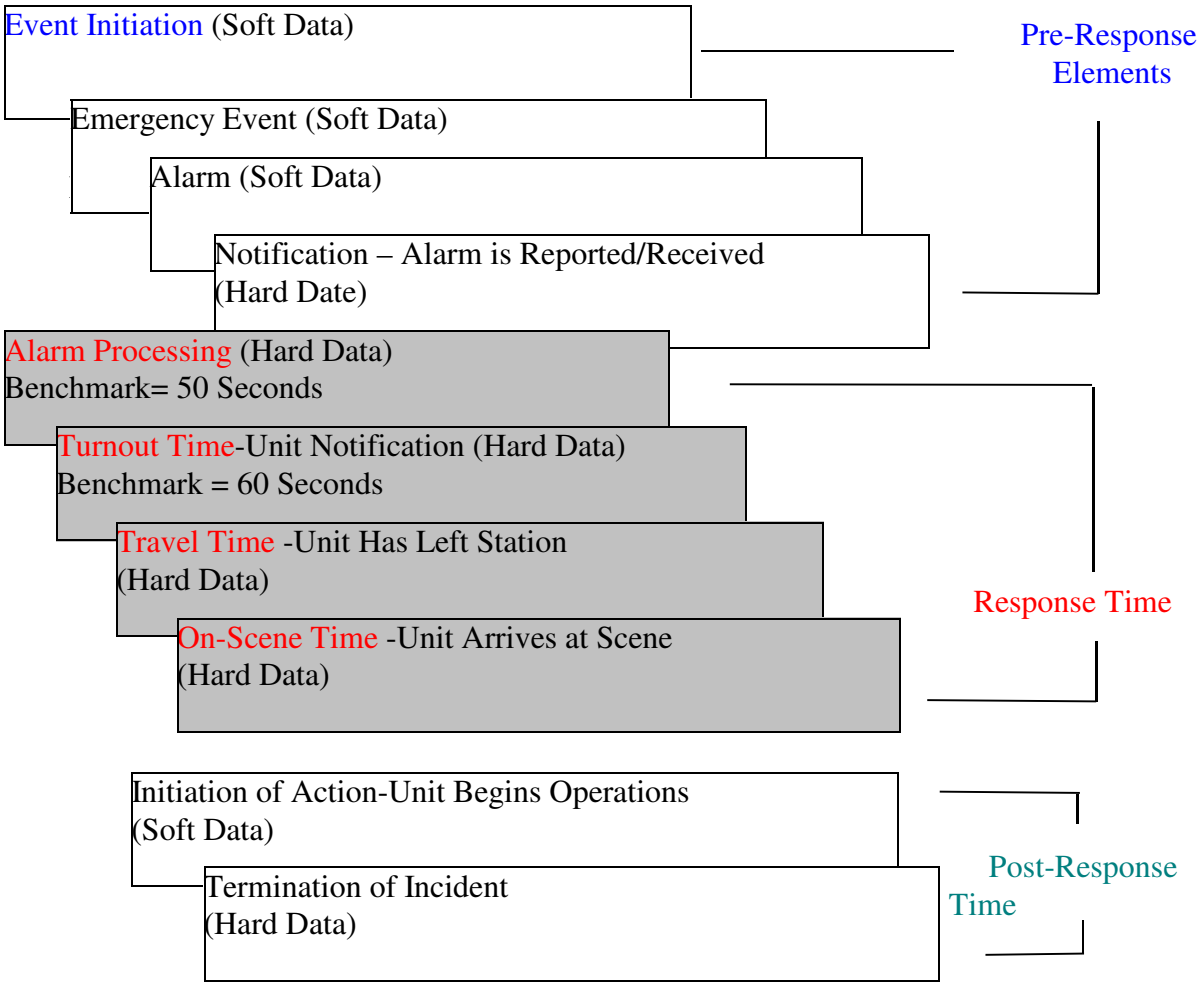
The objective of risk assessment is to reduce the truly serious loss to a very unusual event. This involves trying to keep routine emergencies from becoming serious loss situations by distributing the resources needed to respond to the anticipated event throughout the city. Flashover, response times, staffing levels, and homeland security issues are all key considerations for reducing loss of life and property.

Developing standards of response coverage must take into account not only the significance of flashover, but such other factors as the time/temperature relationship in a normal house burn, the relationship between time of medical intervention and survival in a cardiac event, the time when external defibrillation is applied, and the effects of combustion products on life safety.

In a cardiac arrest, the point of awareness is the recognition of the patient's condition by a by-stander or medical personnel at which point the greatest chance for survival resides within the first 10 minutes during which, external defibrillation measures are taken. In the absence of other mitigating strategies, response time has a direct relationship to the critical time interval for fire and medical emergencies with respect to outcome, patient survival, or property saved.

Various scientific models have been developed to correlate the relationship between time and an organization's ability to successfully mitigate emergency events. One can readily determine that the window of opportunity for both fire and critical medical emergencies to effectively intervene is narrowly defined. (Exhibit 5, page 17)

STATE OF NORMALCY



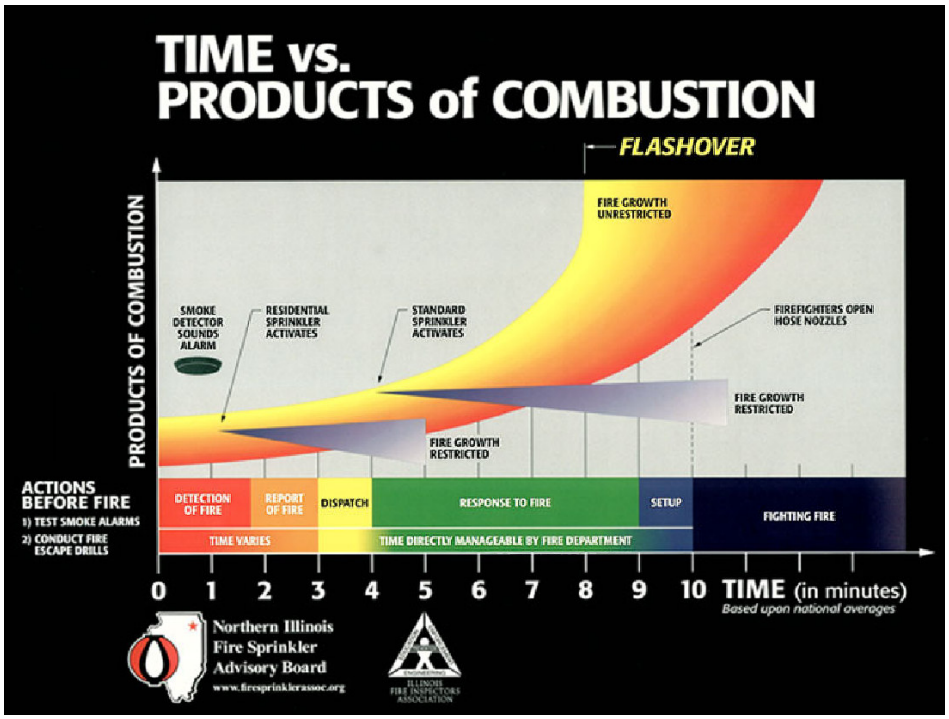
(Exhibit 5)

Response Service Level Objectives Will Be Based on Risk Factors Which Translate Into Distribution and Concentration of Resources

THE FLASHOVER POINT

Firefighters encounter a wide variety of conditions at each fire. Some fires will be at an early stage, and others may already have spread throughout the building. This variation in conditions complicates attempts to compare fire department capability. A common reference point must be used so that the comparisons are made under equal conditions.

In the area of fire suppression, our service-level objectives are intended to prevent **THE FLASHOVER POINT,** a particular point of a fire's growth that marks a significant shift in its threat to life and property.



Alarm Called In	Dispatch	Turn Out Time	Travel Time	Set up 40 sec to 3 minutes	Fire Attack Begins

Industry Standard response times require the 1st arriving unit to be on-scene within 4 minutes 90% of the time. **The Fresno City Fire Department currently responds within 5:30, 65% of the time.**

Fire suppression tasks that are required at a typical fire scene can vary a great deal. What fire companies must do, simultaneously and quickly, if they are to save lives and limit property damage, is to arrive within a short period of time, with adequate resources to do the job. Matching the arrival of resources within a specific time period is a great challenge.

The Stages of Fire Growth
Virtually all structure fires progress through a series of identifiable stages:

Stage 1 - The Ignition Stage - The ignition of a fuel source takes place. Ignition may be caused by any number of factors, from natural occurrences such as lightning, to premeditated arson.

Stage 2 - The Flame Stage - The fuel initially ignited is consumed. If the fire is not terminated in this stage, the fire will progress to the smoldering stage or go directly to flashover.

Stage 3 - The Smoldering Stage - The fuel continues to heat until enough heat is generated for actual flames to become visible. It is during this stage that large volumes of smoke are produced and most fire deaths occur. Temperatures rise throughout this stage to over 1,000 degrees Fahrenheit in confined spaces, creating the hazard of "back-draft" or smoke explosion. This stage can vary in time from a few minutes to several hours.

Stage 4 - Free Burning or "Flashover" Stage - The fire becomes free burning and continues to burn until the fire has consumed all contents of the room of fire origin, including furnishings, wall and floor coverings, and other combustible contents. Research into the flashover phenomenon has yielded criteria that precisely measure when flashover occurs; however, any exact scientific measurement in the field is extremely difficult. Observable events that would indicate a flashover are "total room involvement" and "free burning." These indicators are easily observable by firefighting personnel and the public and can be easily recorded and retrieved for future evaluation.

Both scientific tests and field observations have shown when flashover is experienced, it has a direct impact on fire protection and the ability of the emergency services system:

1. Flashover occurs at a temperature between 1,000 degrees and 1,200 degrees F. These temperatures are well above the ignition points of all common combustibles in residences, businesses and industries. When this temperature range is reached, all combustibles are immediately ignited. Human survival after this point is highly improbable without specialized protective equipment.

2. At the point of flashover, lethal fire gases such as carbon monoxide, hydrogen sulfide, and cyanide increase explosively. People exposed to these gases, even when not directly exposed to the fire, have drastically reduced chances of survival.

3. Flashover can occur within a relatively short period of time after the flame or smoldering stages. Precisely controlled scientific tests indicate that flashover can occur in as little as two minutes from the flame stage. On the other hand, field observations of actual fires indicate that total room involvement can take as long as 20 minutes or more. There is no way to ascertain the

time to flashover since it is not possible to determine when a fire started. We can nevertheless draw a correlation between flashover and the entire fire protection system.

As suggested previously, the number of times that fires are controlled before flashover depends on the entire fire protection system and is not solely dependent on emergency response forces. Built-in fire protection, public education, extinguishment by citizens, and even the consumption of fuel by the fire itself are all factors that affect flashover.

Even when fires are not extinguished by firefighting forces, these personnel often provide other services, ranging from smoke removal to the restoration of built-in control systems. The key point is that all components of the fire protection system, from public education to built-in fire protection to manual fire suppression, must be maintained.

Flashover is a critical stage of fire growth, as it creates a quantum jump in the rate of combustion and a significantly greater amount of water is needed to reduce the burning material below its ignition temperature. A fire that has reached flashover means it is too late to save anyone in the room of origin, and a greater number of firefighters are required to handle the larger hose streams needed to extinguish the fire. A post-flashover fire burns hotter and moves faster, compounding the search-and-rescue problems in the remainder of the structure, and will require more firefighters for fire operations.

The Significance of Flashover

Pre-Flashover	**Post-Flashover**
Limited to one room	May spread beyond one room
Requires smaller attack line	Requires larger, more attack lines
Search and rescue is easier	Compounds search and rescue
Initial assignment can handle	Requires additional companies

Staffing and equipment needs, both can be reasonably predicted for different risk levels and fire stages. The correlation of staffing and equipment needs with fires according to their stage of growth is the basis for response coverage. The goal is to maintain and strategically locate enough firefighters and equipment so that a minimum acceptable response force can reach a reasonable number of fire scenes before flashover and intervene medically in critical medical emergencies. This goal is attainable, given timely notification of the emergency and dispatching of companies in less than 60 seconds.

What Is An Effective Response Force?
An effective response force is defined as the minimum amount of staffing and equipment that must reach a specific emergency within a targeted travel or driving time.

An effective response force should be able to handle the typical emergency medical incident or fire that is reported shortly after it starts and that is within the maximum prescribed travel time for the type of medical emergency or risk level of the structure. Considering that the fire department cannot hold fire risk to zero or successfully resuscitate every patient, our response objective should find a balance between effectiveness, efficiency and reliability that will keep fire risk at a reasonable level, and at the same time, yield the maximum savings of life and property at the least cost.

Response Reliability
Response reliability is defined as the probability that the required amount of staffing and apparatus will be available when a fire or emergency call is received. The Department's response reliability would be 100 percent if every piece of fire Department apparatus were available every time a fire call was received. In reality, there are times when a call is received for a particular company but that company is already at another call. This requires a substitute (second-due) company to be assigned from another station. If the substitute is too far away, the second-due company cannot respond within a time frame to have the most impact on the emergency.

As the number of emergency calls per day increases, so does the probability that a needed piece of apparatus will already be busy when a call is received. Consequently, the Department's response reliability decreases.

The size of the area and the number of calls responded to by that station affects response reliability. The bigger the area, the more calls responded to, the more likely a second call will occur, and units assigned to cover that area will be unavailable requiring responding units from other stations to be dispatched.

Scene Operations
The combination of property and life risk determines the fire ground tasks that must be accomplished to minimize loss. These factors, although interrelated, can be separated into two basic types: fire flow and life safety.

Fire flow tasks are those related to getting water on the fire; life safety tasks are those related to finding injured/ill persons and providing definitive emergency medical care, or trapped victims and removing them from the building.

The required fire flow is based on the building, its size, structural material, distance from other buildings, horizontal and vertical openness (lack of partitions), and its contents, type, density, and combustibility (BTUs per pound).

Life-safety tasks are based upon the number of patients in an emergency medical incident, or occupants, in a fire situation, their location (e.g., a low-rise versus high-rise), their status (awake versus asleep), and their ability to take self-preservation action. For example, ambulatory adults need less assistance than non-ambulatory. The elderly and small children always require more assistance.

The key to a fire department's success at an emergency incident is coordinated teamwork, regardless of whether the tasks are all fire-flow related or a combination of fire flow and life safety.

A fire in an occupied residential single or multi-family structure requires a minimum of eight tasks (Table 1) to be simultaneously conducted in order to stop the loss of civilian lives, stop further property loss, and minimize the risks to the firefighter. The number and type of tasks needing simultaneous action will dictate the minimum number of firefighters needed at different types of fires at the same time. The following table describes each of these tasks, which usually are performed simultaneously in the majority of fire responses to our most prevalent risk: single and multi-family dwellings. These tasks usually occur within the first 15 minutes of a fire ground operation.

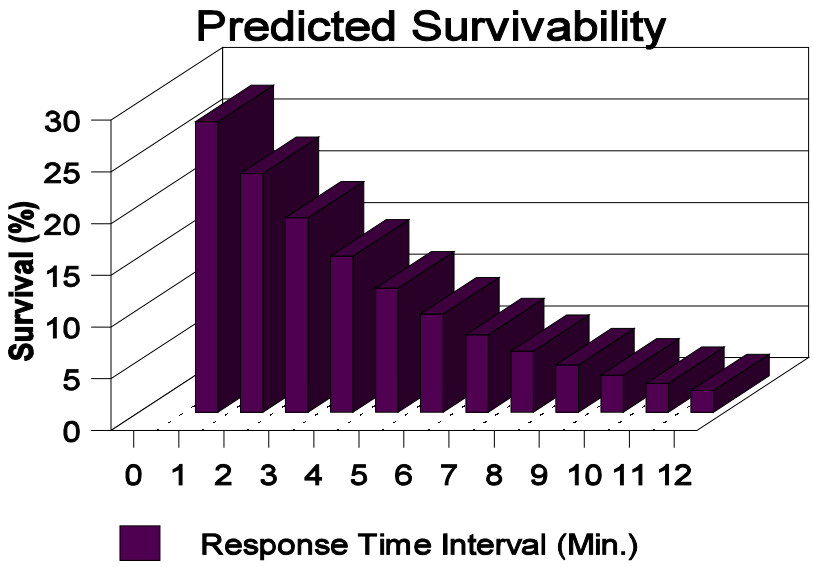
(Table 1)

Minimum Tasks Necessary at a Moderate-Risk-Residential Structural Fire

Task	Firefighters	Company Assigned
Attack Line	2	1st Engine
Rapid Intervention Team	2	Truck/Engine
Search & Rescue	2	Truck
Ventilation	2	Truck
Back-up Line	2	2nd Engine
Safety Officer	1	Assigned
Pump Operator	1	1st Engine
Water Supply	1	2nd Engine/WT
Utilities/Support	1	Rescue/Truck
Command	1	Battalion Chief
Total Personnel	**15**	

THE IMPORTANCE OF QUICK RESPONSE TIMES

Although the greatest amount of personnel and equipment are needed for fire responses, the greatest number of emergency incidents are for medical emergencies. Last year the Fire Department responded to 29,607 calls for service, of those over 19,000 (over 80 percent) were for medical emergencies. According to the American Heart Association, irreversible brain damage (biological death) begins to occur between six to eight minutes after cardiac arrest. However, more recent studies have shown that the 8-minute target is not optimum for the defibrillation response interval; rather the 4-6 minute window is a much higher predictor of survivability (Exhibit 6). The quick response by Fire Department personnel arriving on scene can initiate Basic Life Support (BLS) techniques, including defibrillation, prior to biological death of a victim, thus enhancing the chances for patient survivability.



(Exhibit 6)

Fire station location and company reliability in relation to response time to emergency incidents is vital to the quality of service delivered to the community. As previously mentioned, "flash over" can be avoided by quicker responses. Thus, less damage will be caused by a fire, hence resulting in reduced dollar loss to the citizens and community. As a Department, we pride ourselves on responding to emergencies in a safe and timely manner. As the City continues to grow in urban development, population and square miles, our ability to meet emergency response goals becomes more challenging. The Fresno Municipal Code (Article 4.5) states: "... "*run time" for new residential homes from any Fire Station shall be no more than five minutes. "Run times" for commercial building construction shall be no more than three minutes.*"[10] In addition, the National Fire Protection Association 1710 developed a benchmark standard stating: "*fire departments shall establish a* ***four-minute response time*** *for first arriving units on fire*

suppression and emergency medical incidents (includes one minute turnout time)."[11] Finally, the Commission on Fire Accreditation International identifies optimal industry practices regarding response times to be four minutes for the first arriving unit and eight minutes for additional units.

Proposed Service-Level Objective

A stated service-level goal should take into consideration the city of Fresno's unique service area, but also integrate nationally recognized standards and practices on fire protection and emergency medical services. This service-level objectives is based on a service-area profile that examines the makeup of occupancies, types of uses, the probability/consequences of anticipated incidents, and the historical response trends. Service-level objectives also take into account the standards of coverage (distribution and concentration of resources) needed to maintain an effective response force.

1. **Emergency Response Travel Times - Structure Fires & EMS**
   Travel times for our most common risks - death due to lack of oxygen in a pulseless, non-breathing person, and structure fires in single and multi-family housing units - are based on a goal of:

1st Due Unit (Minutes)	2nd Due Unit (Minutes)	Performance Measure
4	8	90%

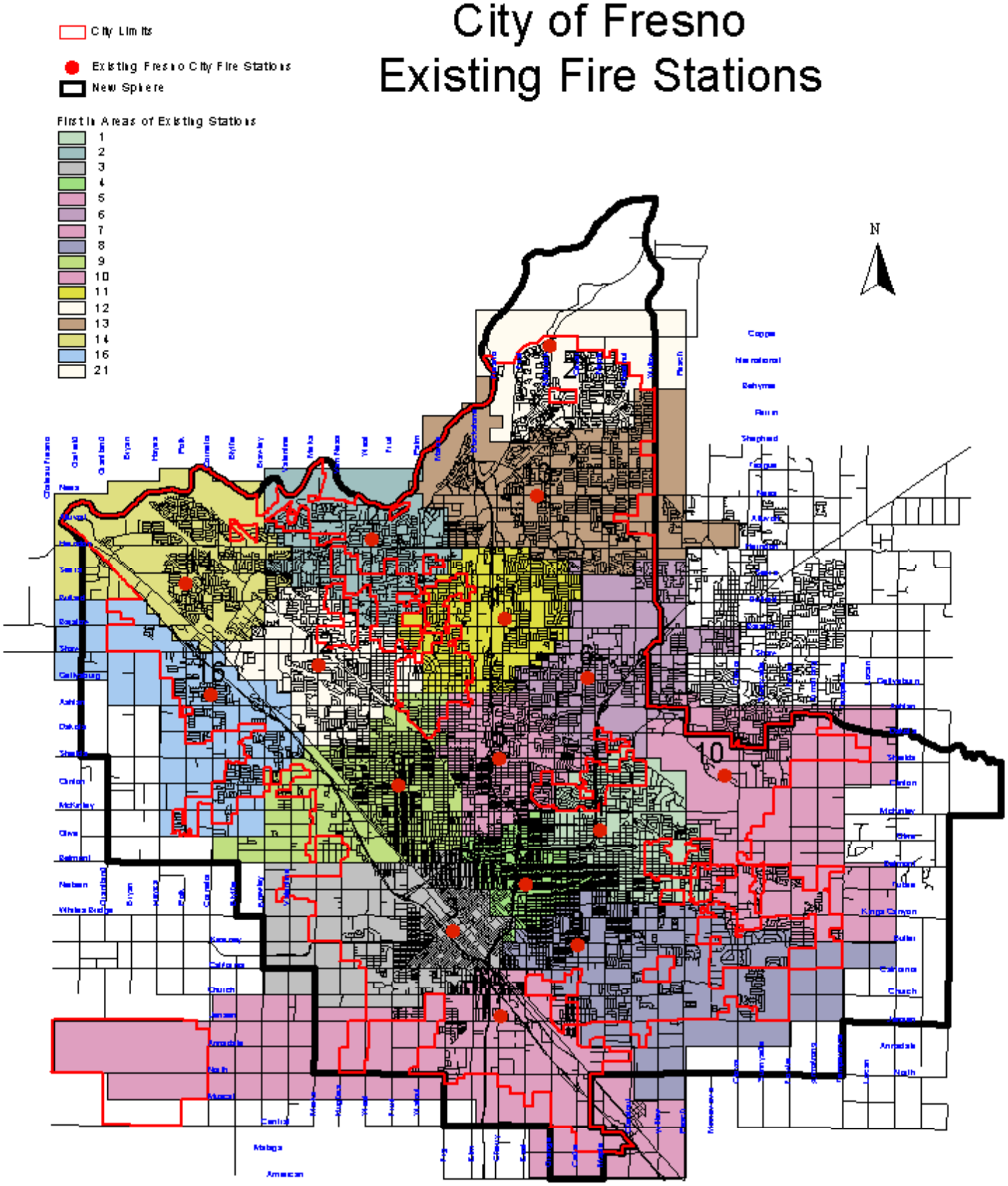
Response Times

Response Times are a critical element for the delivery of quality fire and emergency medical services. A National Fire Department Survey on Response Times conducted by the Phoenix Fire Department indicates how the City of Fresno compares to other agencies.

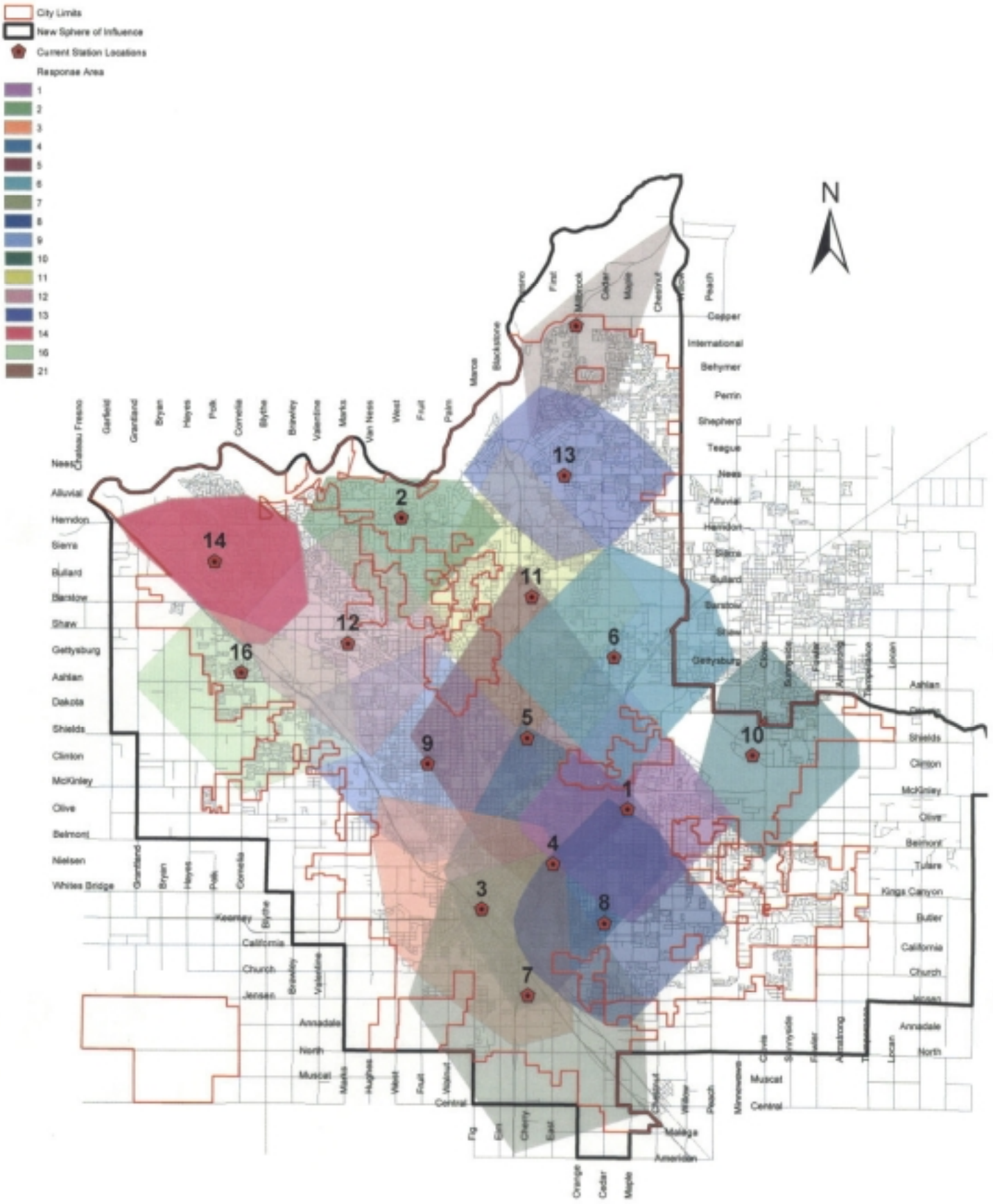
POPULATION	First Unit	Total Alarm	First Unit Met Goal (%) Time
0 - 99,9999	4:05	5:41	85%
100,000 - 499,000	4:29	6:52	78%
500,000 - 999,000	4:42	6:40	73%
1,000,000 +	4:43	8:05	69%
All U.S. Cities	4:19	6:18	80%
Canada	4:00	6:00	84%
FRESNO	**5:30**	**N/A**	**65%**

2. **Identifiable 4-minute response areas in existing and future Fresno City Fire Station locations** (See Exhibits 7-10 , p. 25-28).

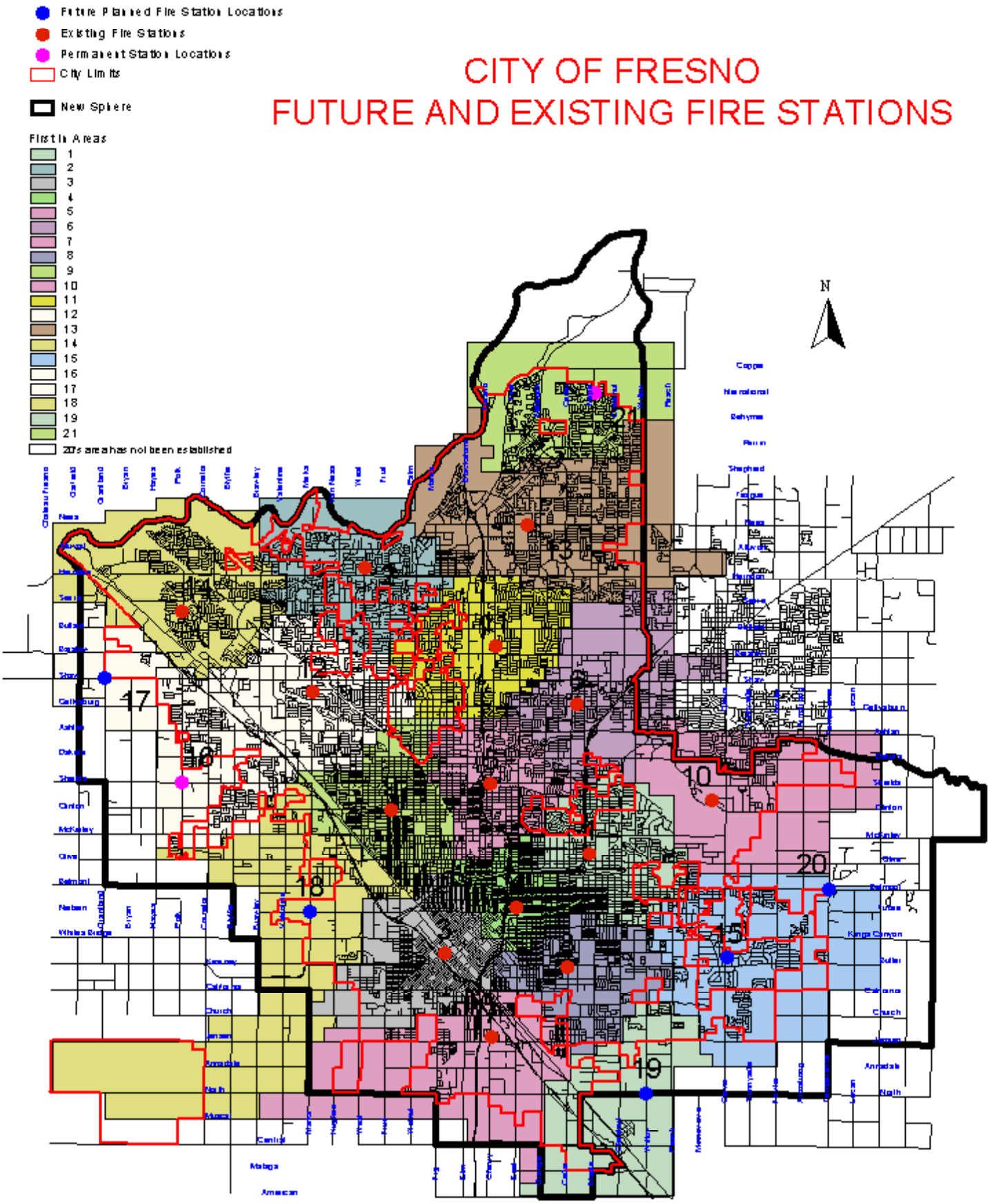
City of Fresno
Existing Fire Stations



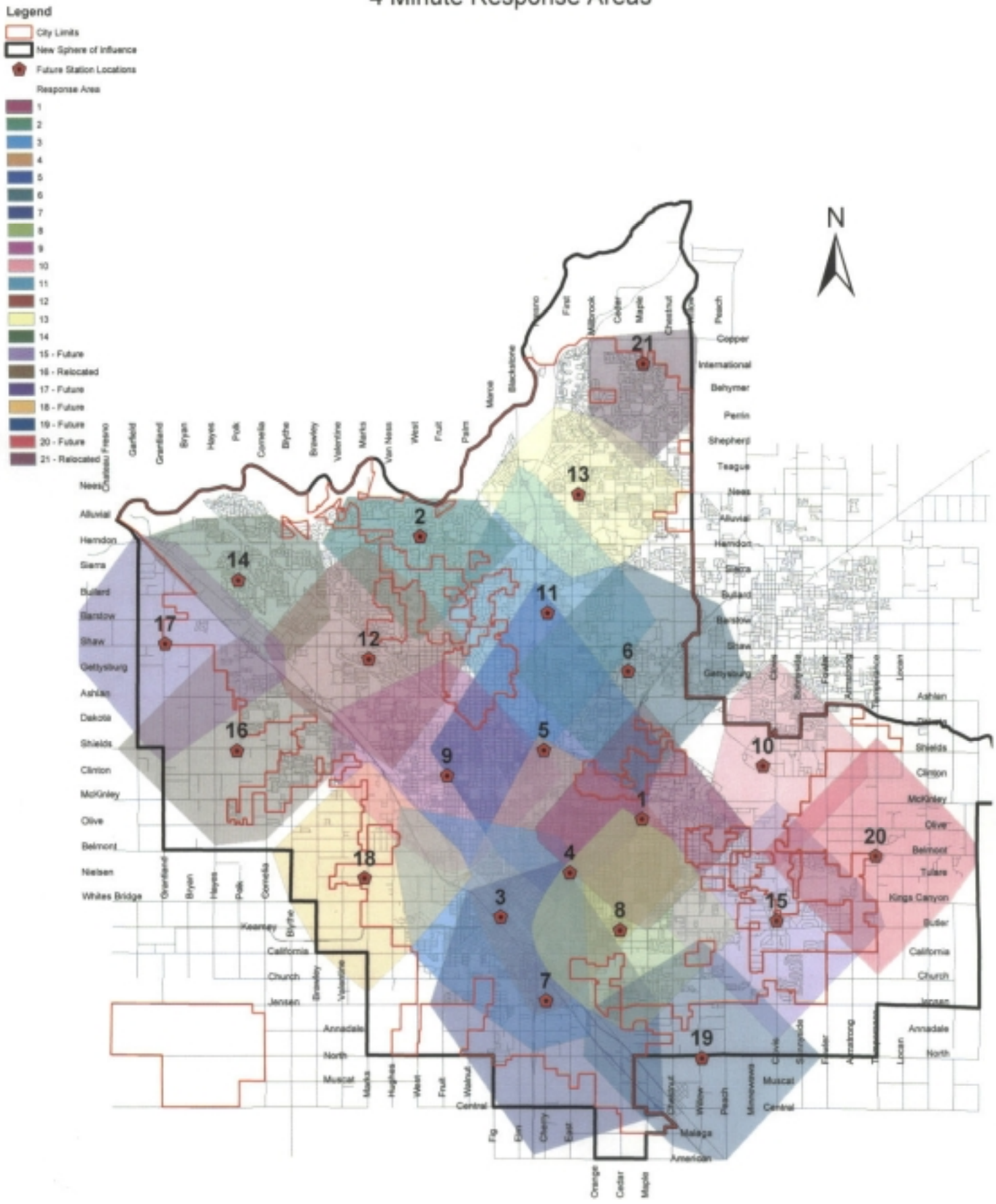
City of Fresno
Current Fire Station Locations
4 Minute Response Areas



CITY OF FRESNO
FUTURE AND EXISTING FIRE STATIONS



City of Fresno
Future Fire Station Locations
4 Minute Response Areas



Fire Station 21 (Olympic and Hampshire - temporary) and Station 14 (Polk and Escalon) were the last stations built in 1991. As we look to the future, meeting the needs of the 2025 General Plan, will require a plan for building and/or relocating fire stations and adding additional response companies to meet the demands for service in our community. Some of the future station locations will serve the growth areas that have been designated by the 2025 General Plan. Development in the growth areas is subject to the UGM Policy, which requires projects to pay their fair share of costs related to a particular fire station. A UGM station includes an engine with a staffing level of three personnel. As we plan for inevitable change, the Fire Department is working closely with other city officials to develop the vision for future fire station locations, emergency response areas, and technology applications that will provide for improving response times.

One such application is "Opticom,"(TM) a priority critical system that gives emergency vehicles control of the traffic signal in the direction of travel. Opticom enables the emergency vehicle operator to temporarily command the signal sequence of the approaching intersection. Fire, medical, and command fire department apparatus have the ability to sequence the intersection lights (turning them to green in their direction). The system works by an emitter in the vehicle that, when activated, sends an optical flashing signal at a certain rate (flashes per second), and at an exact duration, that is detected at the signal. The electronic impulse then interrupts the signal sequences and turns the signal to green in the direction of emergency vehicle. Civilian drivers then have the ability to safely enter the intersection clearing the way for the fire apparatus. This was not included as part of the needs assessment as it falls under public works, but may be a city wide initiative toward reducing emergency response times.

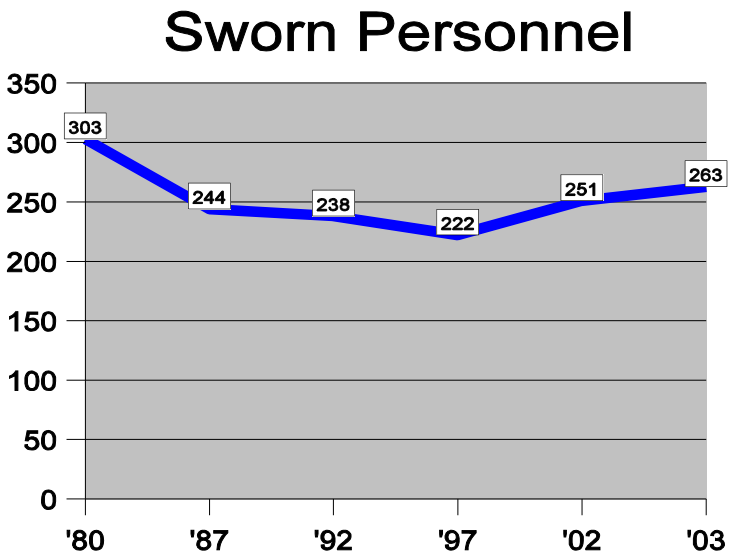
Station 13 (Nees & Bond)
Constructed in 1980 - **Revitalized 2003**

Recently the City Council and Mayor committed to the relocation and building of Station 21 (Maple and International) by the end of 2004 and to building a new Station 15 in the Southeast area of the city by the end of 2004. In addition, approximately $100,000 was added to the Fire Department budget, which, has been utilized for the revitalization and maintenance of existing fire stations.

COMPARATIVE DEPLOYMENT ANALYSIS

The issue of determining an appropriate deployment model for fire departments is a critical component of effectively managing and utilizing resources. Fiscal constraint must be carefully weighed against effective service delivery as administrators meet the challenges presented by increased demands for service, community expectations, and ever changing priorities.

As previously mentioned, in 1980 the Fire Department peaked in its firefighting staffing levels at 303. Exhibit 11 (below) demonstrates how over the last 20 years the number of sworn firefighting personnel has decreased.



(Exhibit 11)

There have been a number of studies conducted in attempts to determine how many firefighters are required to effectively respond to emergency calls, provide fire prevention strategies, and serve the community. These studies include; National Fire Protection Association (NFPA) 1710, OSHA 29 CFR 1910, peer cities comparison, International Association of Fire Chiefs, Phoenix National Study, and the Commission on Fire Accreditation Standards of Response Document.

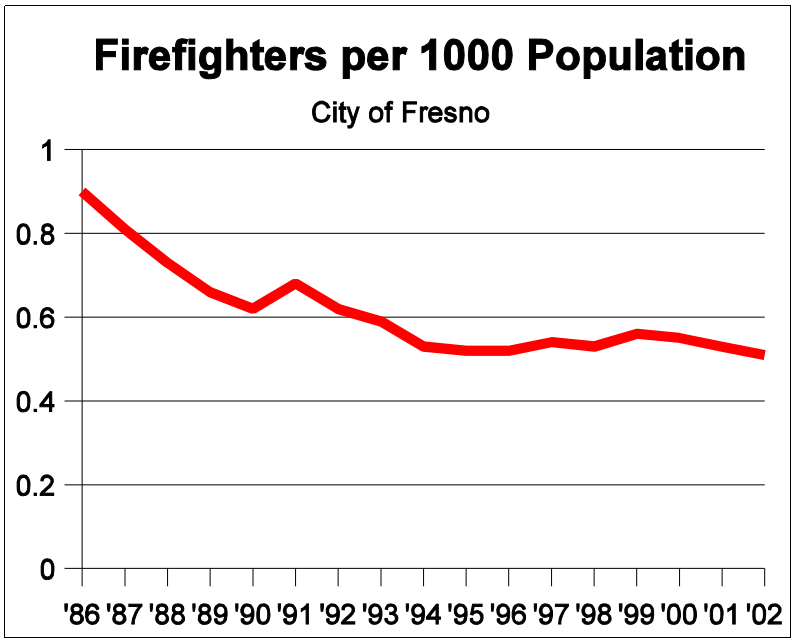
The future growth in the city of Fresno will require the Fire Department to meet an increase in the demand for "calls for service." This demand will require adding sufficient firefighting staff, equipment, and support staff to meet the needs of the community. The research indicates that the firefighter to population ratios normally fall within a range of 1 to 1.5 firefighters per1,000 population.

Finally, the work effort exerted by firefighters during an emergency incident is extremely challenging. Personal Protective Equipment and Self-Contained Breathing Apparatus alone weigh more than 40 pounds; not to mention the active fire within a structure, which can produce heat well over 1,500 degrees. Under these conditions, a firefighter can work for approximately 20 minutes before their abilities are impacted due to fatigue. In many cases our staffing configurations require our personnel working structure fires to work 2 to 3 periods before a rehabilitation break can occur.

ANALYSIS

The Macias Consulting Group, hired by the City of Fresno in 2002 conducted an audit of the Fire Department's staffing levels, stated in their findings:

"...the Fire Department has insufficient staffing. This situation was reported as requiring two-truck response to individual fire incidents. This can cause a domino effect when multiple incidents occur at the same time reducing the department's ability to respond to major incidents and require use of all duty staff. The national benchmark, established by the National Fire Protection Association, 1.6 firefighters per 1000 residents. In Fresno, the staffing is .58 firefighters per 1000 residents. ***This means that Fresno is 64% below the national benchmark.*** *To reach these national benchmarks, the Fire Department would need to more than double its current staffing levels."*[12]



PEER CITIES COMPARISON

To further determine appropriate sworn staffing levels, many fire agencies compare their numerical ranks to the population they serve. This type of comparison quantifies how many firefighters are available to handle a specific segment of the population, usually per thousand population.
Exhibit 12 (below) demonstrates firefighter ratios as comparative to our peer cities. These peer city comparisons were also conducted by the Macias Audit and Weber Report.

City (2003)	# of Sworn Firefighting Personnel	Population	Ratio (Population to Sworn Firefighters)
Fresno FD	263	441,900	**.59**
Anaheim FD	222	328,014	.67
Bakersfield FD	155	221,000	.70
Long Beach FD	430	500,000	.86
Oakland FD	507	409,000	1.23
Riverside FD	197	265,000	.74
Sacramento FD	434	400,018	1.08
Santa Ana FD	250	343,700	.72
Stockton FD	240	310,000	.77
		Average:	**. 81**

(Exhibit 12)

NATIONAL CITIES COMPARISON

In 2000 the **Phoenix Fire Department conducted a National Survey on Fire Department Operations**. The information was grouped according to population size. Cities (such as Fresno) often compare themselves with similar sized populations. Of the 513 surveys sent out to fire departments, 257 were returned, representing an overall response rate of 50.1%.

Explanation of Statistical Data:

Mean: The average of the numbers (sum of all responses divided by the number of responses).
Median: The number that is exactly in the middle of all the responses provided. Half of the numbers are greater than the median and half the numbers are less than the median.

Total Career Personnel:

The following table (Exhibit 13) provides information on total career fire department personnel per thousand population (career personnel/population(1000)). As an example, the average number of total fire department personnel for a city with a population of 100,000 would be 151 (100 x 1.51).

POPULATION	MEAN	MEDIAN
0 - 99,9999	1.78	1.66
100,000 - 499,000	1.51	1.41
500,000 - 999,000	1.76	1.70
1,000,000 +	1.49	1.20
All U.S. Cities	1.65	1.54
Canada	1.43	1.34
FRESNO	**.66**	**.59**

(Exhibit 13)

"ON DUTY" Personnel:

This table (Exhibit 14) provides information for "on duty" fire department personnel per thousand population ("on duty" personnel/population(1000)). As an example, the average number of "on duty" fire department personnel for a city with a population of 100,000 would be 38 (100 x .38).

POPULATION	MEAN	MEDIAN
0 - 99,9999	.45	.44
100,000 - 499,000	.38	.37
500,000 - 999,000	.35	.37
1,000,000 +	.30	.29
All U.S. Cities	.41	.39
Canada	.33	.27
FRESNO	**.16**	**.14**

(Exhibit 14)

HOMELAND SECURITY

In addition to managing growth and development, city governments now face additional challenges. Homeland security is now, a function of both the fire and police department. Our mission has forever changed following the events of September 11, 2001. Fire agencies have now been given an increasingly important role in preparation and response. By implication, local governmental organizations must now absorb these increased public safety costs in budgets that are being cut due, in part, to the financial crisis occurring at the State level.

These costs include the Fire Department responses to weapons of mass destruction events, coordination and ongoing training for responses to potential terrorism incidents. This is a monumental endeavor that should be managed by two individuals, one assigned to each public safety department. Together, both emergency preparedness officer's can work together developing, coordinating and implementing the Homeland Security response plans for the city of Fresno.

In 2002 the Fire Department received a grant of approximately $32,000 to develop a "Shelter-In-Place" training program, which was delivered to local area schools. Future plans for this program is to be expanded into other areas in the community by 2005. Currently the **Fire Department is taking steps to strengthen our Homeland Security Responses** by applying two grants it received; one for Hazardous Materials equipment and Technical Rescue Team., and the other for a new $250,000 Hazardous Materials Response Vehicle.

The Department has also initiated a Citizens Emergency Response Team (CERT). This is an 18-hour training program designed to assist citizens in becoming more self sufficient during and after a major disaster.

These new responsibilities, coordinated Federally through the Office of Homeland Security and implemented at the local level, are designed to coordinate emergency responses to acts of terrorism. Perhaps the best example of this new role can be found in the new color-coded security levels issued by the Federal government, which recommends local fire departments to coordinate activities accordingly, dependent upon the current threat levels.

High Condition (Orange). A High Condition is declared when there is a high risk of terrorist attacks. In addition to the protective measures taken in the previous threat conditions, the Fire Department considers the following general measures in addition to the federal government suggested protective measures.

- Coordination of all necessary security efforts with Federal, State, and local law enforcement, State and Federal agencies;
- Inform all members of Alert Level;
- Establish Floor Watch;
- Cancelling all public events (requests for Fire Department appearances);
- Preparing to execute contingency procedures, such as moving to an alternate site or dispersing their workforce;
- Restricting access to fire Department facilities to essential personnel only;
- Maintain full Hazardous Materials staffing;
- Fire Department management meet with Police Department management regarding readiness issues;
- Preparation to move into the Emergency Operations Center; and
- Follow current Department Standard Operating Procedures for Task Force Operations, Alternate Staffing Patterns, and Hazardous Materials Responses.

Growth, urban development, and the expanding role of the Fire Department based on national security and **Homeland Defense requires the City of Fresno to develop strategies** and identify funding mechanisms to meet the needs of the community **utilizing public safety services**. Future costs associated with Homeland Security for the Fire Department are significant, but failing to plan for these events would be detrimental to the community.

SUMMARY OF FINDINGS

The preliminary assessment of needs is based upon the following standards, comparative analysis, and industry norms.

- The Industry norm for staffing levels is: 1 - 1.5 firefighters per 1,000 population.
- City of Fresno Reports: An increase in staffing levels were recommended in the Macias and Weber Reports.
- Fresno Fire Department, based on projections, will respond to 33 percent more calls for service in the future.
- Fire department personnel could mitigate emergencies quicker and decrease property loss by increased staffing, and adding more companies.
- National Fire Department Survey (Phoenix Fire Department) indicates the median range of firefighters per 1,000 is 1.41 - 1.51.
- Commission On Fire Accreditation International, standards of response coverage/deployment of responses and the fire and emergency self assessment model.
- NFPA, National Fire Protection Association 1710
- **Fresno has a lower firefighter to citizen ratio than any other peer city**.

SUMMARY OF FUTURE COSTS

To meet the community's future needs the Department developed the Summary of Future Costs on the following pages. The definitions below apply to the summary.

- **Priority:** The time frame in which the initial cost could be incurred.
- **Div/Program:** Area within the Fire Department where the cost would be incurred
- **Est. Cost:** The estimated dollar amount associated with the item
- **Ongoing Cost To Operating Budget**: The ongoing cost incurred the following year only. The amount includes a 3 percent inflation rate. These items would have costs in future years that are not shown in the summary.
- **Personnel:** Includes salaries and fringe benefits
- **Operation & Maintenance:** Includes all other costs except Personnel, Light Vehicle and Capital
- **Light Vehicle:** Small vehicles such as sedans, small trucks, vans etc. Does not include fire apparatus (ie engines, ladder trucks or specialty vehicles)
- **Capital:** Includes fire apparatus, one-time expenditures for large purchases of equipment, facility improvements or new facilities.

Department Needs By Division/Program
Fiscal Years 2004 - 2005 (Immediate)

NOTES:
*** The capital projects designated by an asterisk may be combined with Police Department proposed capital projects as a cost savings measure for construction, operation, and maintenance. This possibility is currently being explored.**

**** Projects designated by two asterisks are currently under consideration for bonding .**

***** Use of Fleet Maintenance Division space for the Fire Repair & Maintenance function is currently being explored.**

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	Admin. Division	Add one (1) Computer Systems Technician position to maintain Department computers. Personnel Operation & Maintenance Light Vehicle Total	 $32,443 2,060 15,450 $49,953	 $36,472
Immediate	Admin. Division	Add one (1) Network Systems Specialist position to maintain Department computer software. Personnel Operation & Maintenance Total	 $65,311 5,150 $70,461	 $67,271
Immediate	Admin. Division	Add back one (1) Maintenance Service Worker position deleted in FY 04 budget. Personnel	 $29,541	 $30,425
Immediate	Admin. Division	Upgrade office equipment and workstation. Operation & Maintenance	 $12,360	
Immediate	*Admin. Division	Construct new Fire Headquarters. Current building will be demolished under the 2025 Plan. Capital	 $4,615,350	Operation & Maint Costs To Be Determined
Immediate	Suppression Program	Add one (1) administrative Battalion Chief to manage administrative projects. Personnel Operation & Maintenance Total	 $102,009 10,300 $112,309	 $105,918

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	Suppression Program	Add one (1) administrative Captain to perform administrative projects. Personnel Operation & Maintenance Total	 $84,786 5,150 $89,936	 $88,178
Immediate	Suppression Program	Establish six (6) Rapid Response Units with two (2) person staffing to improve response time and company reliability; forty-eight (48) positions. Personnel Operation & Maintenance Capital Total	 $3,350,949 286,752 1,081,500 $4,719,201	 $3,492,218
Immediate	Suppression Program	Add one (1) additional computer and printer to eleven (11) fire stations. Operation & Maintenance	 $16,995	 $11,330
Immediate	Suppression Program	Replace outdated apparatus - 10 engines. Capital	 $4,120,000	
Immediate	Suppression Program	Replace outdated water tender. Capital	 $257,500	
Immediate	Suppression Program	Install laundry facilities at fifteen (15) stations to maintain personal protective equipment (turnouts). Capital	 $309,000	Operation & Maint Costs To Be Determined
Immediate	**Suppression Program	Station maintenance and renovation capital project. Repair and upgrade sixteen (16) fire stations. Capital	 $4,192,100	
Immediate	**Suppression Program	Station 15 - Construct station in Southeast Fresno. Capital	 $2,781,000	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	Suppression Program	Station 15 - Staff and equip new station with one engine company in Southeast Fresno; sixteen (16) positions. Personnel Operation & Maintenance Capital Total	 $1,179,560 166,789 424,400 $1,770,749	 $1,313,303
Immediate	Suppression Program	Increase truck companies to four (4) person minimum staffing per apparatus; twenty (20) positions. Personnel Operation & Maintenance Total	 $1,274,539 123,076 $1,397,615	 $1,330,261
Immediate	Suppression Program	Purchase rehabilitation unit to provide rehabilitation services to personnel at fires. Light Vehicle	 $106,100	Operation & Maint Costs To Be Determined
Immediate	Suppression Program	Increase apparatus reserve pool by one (1) engine to maintain a 3:1 ratio of front line units to reserve units. Capital	 $424,400	
Immediate	Suppression Program	Replace two (2) aerial ladder trucks that are beyond their front line useful lives. Capital	 $1,485,400	
Immediate	Suppression Program	Install emergency power generators at fifteen (15) stations. Capital	 $1,200,000	Operation & Maint Costs To Be Determined
Immediate	Communication Program	Add thirteen (13) dedicated Fire emergency dispatch personnel positions to handle fire calls on a full-time basis. Personnel Operation & Maintenance Light Vehicle Total	 $747,621 34,505 66,950 $849,076	 $783,858

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	Communication Program	Add one (1) Fire OES/PIO Officer position to coordinate department emergency services program and public information. Personnel Operation & Maintenance Light Vehicle Total	 $44,559 5,150 15,450 $65,159	 $48,952
Immediate	Communication Program	Purchase and install two (2) repeater radio transmitters including additional radio frequencies to upgrade communications to meet Department needs. Capital	 $3,090,000	Operation & Maint Costs To Be Determined
Immediate	Communication Program	Purchase 21 in-mask SCBA communication systems for fire companies. Operation & Maintenance	 $17,825	
Immediate	Communication Program	Purchase cell phones for 18 fire companies to be used for backup communications. Operation & Maintenance	 $13,369	 $11,124
Immediate	Communication Program	Replace 60 outdated portable radios used by fire personnel on service calls. Operation & Maintenance	 $57,294	
Immediate	Communication Program	Purchase one (1) mobile communication/ command vehicle to be used on large incidents. Capital	 $371,350	Operation & Maint Costs To Be Determined
Immediate	Communication Program	Purchase a Voice CAD Dispatch System which will decrease response times to incidents and meet ISO Rating requirements for a backup dispatch system. Capital	 $450,925	Operation & Maint Costs To Be Determined
Immediate	EMS Program	Replace outdated CPR training equipment. Operation & Maintenance	 $2,060	
Immediate	EMS Program	Provide additional CPR and Defibrillator Instructor training. Operation & Maintenance	 $2,575	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	TRT Program	Replace one (1) TRT light vehicle which is beyond its useful life. Light Vehicle	$87,550	
Immediate	TRT Program	Purchase one (1) additional apparatus and equipment to be used by TRT team. Operation & Maintenance Capital Total	$ 53,050 424,400 $477,450	Operation & Maint Costs To Be Determined
Immediate	Hazmat Team	Purchase various communications equipment for Hazmat team. Operation & Maintenance	$6,232	
Immediate	Hazmat Team	Provide certification pay and annual physicals for nine (9) additional Hazmat team members. Personnel Operation & Maintenance Total	$30,480 5,252 $35,732	$36,804
Immediate	Hazmat Team	Purchase one (1) additional Hazmat vehicle. Capital	$265,250	Operation & Maint Costs To Be Determined
Immediate	Repair & Maint. Section	Provide training to two (2) new mechanics to certify them in the repair and maintenance of fire apparatus. Operation & Maintenance	$5,150	
Immediate	Repair & Maint. Section	Purchase additional repair and maintenance tools and equipment. Operation & Maintenance	$10,300	
Immediate	Repair & Maint. Section	Purchase fire equipment to fully outfit all reserve apparatus. Operation & Maintenance	$51,500	
Immediate	Repair & Maint. Section.	Purchase one (1) air refilling vehicle to service SCBA bottles at fire sites. Capital	$309,000	Operation & Maint Costs To Be Determined

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	***Repair & Maint. Section	Construct new repair and maintenance facility. Capital	 $2,420,500	Operation & Maint Costs To Be Determined
Immediate	Repair & Maint. Section	Remove underground fuel tank and reinstall an above ground tank for fire apparatus use. Capital	 $37,080	
Immediate	Training Section	Add five (5) additional training staff positions to provide training to new personnel. Personnel Operation & Maintenance Light Vehicle Total	 $348,139 25,750 72,100 $445,989	 $375,673
Immediate	Training Section	Purchase new apparatus and use older apparatus for training personnel. Two (2) engines and one (1) aerial ladder truck. Capital	 $1,545,000	
Immediate	Training Section	Add two (2) additional training staff positions to provide training to existing personnel in safety and driving disciplines. Personnel Operation & Maintenance Light Vehicle Total	 $167,436 10,610 31,830 $209,876	 $180,504
Immediate	*Training Section	Construct new training facility. Capital	 $3,496,844	Operation & Maint Costs To Be Determined
Immediate	Prevention Division	Add six (6) additional inspection staff positions to bring division personnel to appropriate level for size of community. Personnel Operation & Maintenance Light Vehicle Total	 $334,401 30,900 92,700 $458,001	 $367,225

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
Immediate	Prevention Division	Add six (6) Arson Investigator positions to provide an additional investigator on duty each day and investigators to conduct investigations. Personnel Operation & Maintenance Light Vehicle Total	 $466,547 30,900 103,000 $600,447	 $501,942
Immediate	Prevention Division	Add back one (1) Juvenile Firesetter Counselor temporary position that was deleted in the FY 04 budget. Establish this as a permanent full-time position in the division. Personnel Operation & Maintenance Total	 $40,804 5,150 $45,954	 $42,028
Immediate	Prevention Division	Add back one (1) Senior Administrative Clerk position that was deleted in the FY 04 budget. Personnel Operation & Maintenance Total	 $33,431 5,150 $38,581	 $34,434
Immediate	Prevention Division	Establish one (1) Deputy Fire Marshall position to assist the Fire Marshall in managing the division and providing service to the community. Personnel Operation & Maintenance Light Vehicle Total	 $105,079 5,305 53,050 $163,434	 $118,324
		Personnel Operation & Maintenance Light Vehicle Capital IMMEDIATE NEEDS SUBTOTAL	$ 8,437,635 1,006,659 644,180 33,300,999 $43,389,473	 $8,976,244

Department Needs By Division/Program Fiscal Years 2006 - 2010				
Priority	**Div./Program**	**Description**	**Est. Cost**	**Next Year Ongoing Cost to Operating Budget**
2006	Admin. Division	Add one (1) Bureau Chief position to oversee the Support Services Division. Personnel Operation & Maintenance Total	 $128,280 18,035 $146,315	 $132,129
2006	Admin. Division	Add one (1) Senior Secretary position to assist the new Bureau Chief. Personnel Operation & Maintenance Total	 $43,123 5,465 $48,588	 $44,416
2006	Admin. Division	Add one (1) Human Resource Analyst position to assist in the hiring of the Department personnel. Personnel Operation & Maintenance Total	 $57,852 5,465 $63,317	 $59,587
2006	Admin. Division	Add one (1) Senior Accountant Auditor position to be a first line supervisor of the accounting area and provide additional accounting expertise. Personnel Operation & Maintenance Total	 $65,353 5,465 $70,818	 $67,314
2006	Admin. Division	Add one (1) Senior Account Clerk position to assist the current staff with accounting and payroll tasks. Personnel Operation & Maintenance Total	 $38,476 5,465 $43,941	 39,631

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2006	Suppression Program	Add four (4) additional Battalion Chief positions to provide an additional chief on duty each day. Personnel Operation & Maintenance Light Vehicle Total	 $432,995 28,145 71,045 $532,185	 $462,665
2006	Suppression Program	Increase one-half of the fifteen (15) engine companies to four (4) person minimum staffing per apparatus; thirty (30) positions. Personnel Operation & Maintenance Total	 $1,969,470 190,182 $2,159,652	 $2,055,575
2006	Suppression Program	Station 5 - Add one (1) additional aerial ladder truck company to improve response time and company reliability in central Fresno; sixteen (16) positions. Personnel Operation & Maintenance Capital Total	 $1,215,135 101,431 765,100 $2,081,666	 $1,266,000
2006	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $109,300	
2006	EMS Program	Replace ten (10) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	 $38,254	
2006	EMS Program	Purchase remaining medical equipment required to meet County of Fresno standards for providing medical services in the county. Operation & Maintenance	 $16,395	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2006	TRT Program	Establish a six (6) person rescue company to respond to community needs; twenty-four (24) positions. Personnel Operation & Maintenance Total	 $1,740,327 152,146 $1,892,473	 $1,814,156
2006	Hazmat Team Program	Replace Hazmat apparatus beyond its front line useful life. Capital	 $546,500	
2006	Hazmat Team Program	Add one (1) Battalion Chief position to administer the Hazmat program. Personnel Operation & Maintenance Light Vehicle Total	 $108,249 10,930 71,045 $190,224	 $124,798
2006	Repair & Maint. Section	Add two (2) Fire Equipment Mechanic I positions to perform repairs and maintenance on fire apparatus. Personnel Operation & Maintenance Total	 $ 87,181 30,604 $117,785	 $89,796
2006	Training Section	Add one (1) Fire Captain instructor position to administer the Technical Rescue Team training program. Personnel Operation & Maintenance Light Vehicle Total	 $ 89,972 5,465 32,790 $128,227	 $99,157
2006	Training Section	Add one (1) Staff Assistant position to provide computer and multimedia support to the Training Section. Personnel Operation & Maintenance Total	 $42,300 2,732 $45,032	 $43,569

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2006	Training Section	Add one (1) Bureau Chief position to oversee the Training and Repair & Maintenance sections. Personnel Operation & Maintenance Total	 $128,280 18,035 $146,315	 $133,930
2006	Training Section	Upgrade drill tower to provide state of the art training to fire personnel. Capital	 $203,845	
2006	Prevention Division	Add six (6) additional inspector positions to perform required inspection based on growth within the community. Personnel Operation & Maintenance Light Vehicle Total	 $324,930 32,790 98,370 $456,090	 $358,865
2006	Prevention Division	Add one (1) additional Administrative Clerk II position to maintain inspection files based on growth within the community. Personnel Operation & Maintenance Total	 $32,169 5,465 $37,634	 $33,134
2007	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $112,600	
2007	Suppression Program	Increase one-half of the fifteen (15) engine companies to four (4) person minimum staffing per apparatus; thirty (30) positions. Personnel Operation & Maintenance Total	 $2,028,932 195,924 $2,224,856	 $2,117,635
2007	Suppression Program	Increase apparatus reserve pool by one (1) rapid response unit to maintain a 3:1 ratio of front line units to reserve units. Capital	 $168,900	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2007	Communication Program	Add five (5) additional dedicated Fire emergency dispatch personnel positions to handle fire calls on a full-time basis. Personnel Operation & Maintenance Light Vehicle Total	 $282,786 12,386 33,780 $328,952	 $297,951
2007	Communication Program	Add one (1) Senior Administrative Clerk position to assist the Communications Battalion Chief. Personnel Operation & Maintenance Total	 $36,547 5,630 $42,177	 $37,643
2007	EMS Program	Add one (1) Fire Captain position to administer the Emergency Medical Services training program. Personnel Operation & Maintenance Light Vehicle Total	 $ 92,688 5,630 33,780 $132,098	 $102,151
2007	Training Section	Add one (1) Senior Administrative Clerk position to assist the current staff with clerical and accounting tasks. Personnel Operation & Maintenance Total	 $36,547 5,630 $42,177	 $37,643
		Fiscal Years 2006 - 2007 SUBTOTAL	**$12,126,316**	
2008	Suppression Program	Replace one (1) aerial ladder truck which is beyond its front line useful life. Capital	 $812,000	
2008	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $116,000	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2008	Communication Program	Purchase fifty (50) portable radios to be used during disasters or terrorist incidents. Radios will be maintained at the Department Operations Center. Operation & Maintenance	$52,200	
2008	Training Section	Add one (1) Fire Captain instructor position to provide training to existing personnel in the Emergency Medical Services discipline. Personnel Operation & Maintenance Light Vehicle Total	$ 95,487 5,800 34,800 $136,087	$105,235
2009	Admin. Division	Add one (1) Assistant Fire Chief position to provide management support to Fire Chief. Personnel Operation & Maintenance Total	$146,979 19,718 $166,697	$151,388
2009	Suppression Program	Stations 16 and 18 - Construct new fire stations in West and Southwest Fresno respectively. Capital	$7,170,000	
2009	Suppression Program	Replace one (1) fire engine which is beyond its front line useful life. Capital	$478,000	
2009	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$119,500	
2009	Hazmat Program	Add one (1) additional Fire Captain position to perform Hazmat program administrative duties. Personnel Operation & Maintenance Total	$ 98,368 5,975 $104,343	$102,308

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2009	Hazmat Program	Add one (1) Senior Administrative Clerk position to provide assistance to the Hazmat program staff. Personnel Operation & Maintenance Total	 $38,786 5,975 $44,761	$39,950
2009	Training Section	Add one (1) Fire Captain instructor position to provide multi-company drill training to existing personnel. Personnel Operation & Maintenance Light Vehicle Total	 $ 98,368 5,975 35,850 $140,193	$109,272
2009	Prevention Division	Add five (5) additional inspector positions to perform required inspections based on growth within the community. Personnel Operation & Maintenance Light Vehicle Total	 $308,678 29,875 89,625 $428,178	$341,129
2009	Prevention Division	Add one (1) 40 hour Arson Investigator position to complete investigations based on growth within the community. Personnel Operation & Maintenance Light Vehicle Total	 $ 90,214 5,975 29,875 $126,064	$100,374
2009	Prevention Division	Add three (3) Senior Administrative Clerk positions to provide assistance to the Prevention Division staff based on growth within the community. Personnel Operation & Maintenance Total	 $116,359 17,925 $134,284	$119,850

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2009	Prevention Division	Add two (2) Administrative Clerk II positions to provide assistance to the Prevention Division staff based on growth within the community. Personnel Operation & Maintenance Total	 $70,341 11,950 $82,291	 $72,451
		Fiscal Years 2008 - 2009 SUBTOTAL	**$10,110,598**	
2010	Admin. Division	Add one (1) additional Computer Systems Technician position to maintain Department computers based on growth of the Department. Personnel Operation & Maintenance Light Vehicle Total	 $38,143 8,002 18,465 $64,610	 $42,910
2010	Suppression Program	Station 13 - Add an additional aerial ladder truck company to improve response time and company reliability in Northeast Fresno; sixteen (16) positions. Personnel Operation & Maintenance Capital Total	 $1,368,557 114,236 861,700 $2,344,493	 $1,425,842
2010	Suppression Program	Station 18 - Staff and equip new station with one engine company in Southwest Fresno; sixteen (16) positions. Personnel Operation & Maintenance Capital Total	 $1,368,557 193,512 492,400 $2,054,469	 $1,510,540
2010	Suppression Program	Replace five (5) fire engines which are beyond their front line useful lives. Capital	 $2,462,000	
2010	Suppression Program	Replace six (6) rapid response units which are beyond their front line useful lives. Capital	 $960,180	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2010	Suppression Program	Increase apparatus reserve pool by one (1) aerial ladder truck to maintain a 3:1 ratio of front line units to reserve units. Capital	$861,700	
2010	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$123,100	
2010	Communication Program	Install fiber optic cable connections in fire stations to enhance communication, data transmission and provide two-way audio/video training. Capital	To Be Determined	Operation & Maint Costs To Be Determined
2010	EMS Program	Replace fourteen (14) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	$60,319	
2010	TRT Program	Establish a six (6) person rescue company to respond to community needs; twenty-four (24) positions. Personnel Operation & Maintenance Capital Total	$1,960,058 232,905 492,400 $2,685,363	$2,043,205
2010	Training Section	Add two (2) additional training staff positions to provide training to existing personnel in safety and driving disciplines. Personnel Operation & Maintenance Light Vehicle Total	$194,264 12,310 36,930 $243,504	$209,298
		Fiscal Year 2010 SUBTOTAL	**$11,859,738**	
		Personnel Operation & Maintenance Light Vehicle Capital FISCAL YEARS 2006 - 2010 SUBTOTAL	$14,974,751 2,260,821 586,355 16,274,725 $34,096,652	$15,791,497

Department Needs By Division/Program Fiscal Years 2011 - 2015				
Priority	**Div./Program**	**Description**	**Est. Cost**	**Next Year Ongoing Cost to Operating Budget**
2011	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$126,800	
2011	EMS Program	Replace eleven (11) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	$48,818	
2012	Suppression Program	Purchase one (1) additional water tender to respond to community needs. Capital	$326,500	Operation & Maint Costs To Be Determined
2012	Suppression Program	Stations 17 - Construct new fire station in Northwest Fresno. Capital	$3,918,000	
2012	Suppression Program	Replace one (1) aerial ladder truck which is beyond its front line useful life. Capital	$914,200	
2012	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$130,600	
2012	Communication Program	Add seven (7) additional dedicated Fire emergency dispatch personnel positions to handle fire calls on a full-time basis. Personnel Operation & Maintenance Total	$543,002 27,426 $570,428	$562,520
		Fiscal Years 2011 - 2012 SUBTOTAL	**$6,035,346**	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2013	Suppression Program	Station 17 - Staff and equip new station with one engine company in Northwest Fresno; sixteen (16) positions. Personnel Operation & Maintenance Capital Total	 $1,495,295 211,434 538,000 $2,244,729	 $1,650,427
2013	Suppression Program	Replace 200 Self Contained Breathing Apparatus. Units are approaching the end of their useful lives. Operation & Maintenance	 $591,800	
2013	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $134,500	
2013	Communication Program	Replace portable radios with current technology and provide a radio to each sworn staff in the Suppression and Prevention divisions. Operation & Maintenance	 $726,300	
2014	Suppression Program	Replace two (2) fire engines which are beyond their front line useful lives. Capital	 $1,108,000	
2014	Suppression Program	Replace two (2) aerial ladder trucks which are beyond their front line useful lives. Capital	 $1,939,000	
2014	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $138,500	
2014	Prevention Program	Add two (2) Fire Inspector 1 positions based on growth within the community. Personnel Operation & Maintenance Light Vehicle Total	 $123,945 13,850 41,550 $179,345	 $138,399
		Fiscal Years 2013 - 2014 SUBTOTAL	**$7,062,174**	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2015	Suppression Program	Stations 19 - Construct new fire station in South Fresno. Capital	$4,278,000	
2015	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$142,600	
2015	Suppression Program	Replace six (6) rapid response units which are beyond their front line useful lives. Capital	$1,112,280	
2015	Suppression Program	Replace one (1) rapid response reserve unit which is beyond its useful life. Capital	$185,380	
2015	EMS Program	Replace sixteen (16) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	$79,856	
2015	Hazmat Program	Replace Hazmat decontamination trailer which is beyond its useful life. Capital	$618,000	
		Fiscal Year 2015 SUBTOTAL	**$6,416,116**	
		Personnel Operation & Maintenance Light Vehicle Capital FISCAL YEARS 2011 - 2015 SUBTOTAL	$ 2,162,242 2,372,484 41,550 14,937,360 $19,513,636	$2,351,346

Department Needs By Division/Program Fiscal Years 2016 - 2020				
Priority	**Div./Program**	**Description**	**Est. Cost**	**Next Year Ongoing Cost to Operating Budget**
2016	Suppression Program	Station 19 - Staff and equip new station with one engine company and one aerial ladder truck company in South Fresno; thirty-two (32) positions. Personnel Operation & Maintenance Capital Total	 $3,264,078 348,210 1,614,800 $5,227,088	 $3,482,357
2016	Suppression Program	Replace ten (10) fire engines which are beyond their front line useful lives. Capital	 $5,872,000	
2016	Suppression Program	Increase apparatus reserve pool by one (1) fire engine to maintain a 3:1 ratio of front line units to reserve units. Capital	 $587,200	
2016	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $146,800	
2016	EMS Program	Replace eleven (11) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	 $54,901	
2016	EMS Program	Replace medical equipment required to meet County of Fresno standards for providing medical services in the county. Operation & Maintenance	 $21,390	
2016	Repair & Maint. Section	Add two (2) Fire Equipment Mechanic I positions to perform repairs and maintenance on fire apparatus. Personnel Operation & Maintenance Total	 $117,092 41,104 $158,196	 $120,605

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2016	Repair & Maint. Section	Purchase one (1) additional service truck to provide repairs to apparatus in the field. Light Vehicle	$132,120	Operation & Maint Costs To Be Determined
2017	Suppression Program	Replace one (1) fire engine which is beyond its front line useful life. Capital	$604,400	
2017	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$151,100	
2017	Suppression Program	Replace one (1) rapid response reserve unit which is beyond its useful life. Capital	$196,430	
		Fiscal Years 2016 - 2017 SUBTOTAL	**$13,151,625**	
2018	Suppression Program	Station 20 - Construct new fire station in Southeast Fresno. Capital	$4,665,000	
2018	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$155,500	
2019	Suppression Program	Station 20 - Staff and equip new station with one engine company in Southeast Fresno; sixteen (16) positions. Personnel Operation & Maintenance Capital Total	$1,778,789 251,520 640,000 $2,670,309	$1,963,329
2019	Suppression Program	Replace one (1) aerial ladder truck which is beyond its front line useful life. Capital	$1,120,000	
2019	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$160,000	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2019	Prevention Program	Add two (2) Fire Inspector 1 positions based on growth within the community. Personnel Operation & Maintenance Light Vehicle Total	 $143,186 16,000 48,000 $207,186	 $161,154
		Fiscal Years 2018 - 2019 SUBTOTAL	**$8,977,995**	
2020	Suppression Program	Replace two (2) aerial ladder trucks which are beyond their front line useful lives. Capital	 $2,304,400	
2020	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $164,600	
2020	Suppression Program	Replace six (6) rapid response units which are beyond their front line useful lives. Capital	 $1,283,880	
2020	EMS Program	Replace seventeen (17) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	 $97,937	
2020	Hazmat Program	Replace one (1) Hazmat apparatus which is beyond its front line useful life. Capital	 $823,000	
		Fiscal Year 2020 SUBTOTAL	**$4,673,817**	
		Personnel Operation & Maintenance Light Vehicle Capital FISCAL YEARS 2016 - 2020 SUBTOTAL	$ 5,303,145 1,609,062 180,120 19,711,110 $26,803,437	 $5,727,445

Department Needs By Division/Program Fiscal Years 2021 - 2025				
Priority	**Div./Program**	**Description**	**Est. Cost**	**Next Year Ongoing Cost to Operating Budget**
2021	Suppression Program	Replace one (1) aerial ladder truck which is beyond its front line useful life. Capital	$1,185,100	
2021	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$169,300	
2021	EMS Program	Replace thirteen (13) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	$77,032	
2021	Hazmat Team Program	Replace one (1) Hazmat apparatus which is beyond its front line useful life. Capital	$846,500	
2022	Suppression Program	Replace one (1) fire engine which is beyond its front line useful life. Capital	$869,200	
2022	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$217,300	
		Fiscal Years 2021 - 2022 SUBTOTAL	**$3,364,432**	
2023	Suppression Program	Replace one (1) aerial ladder truck which is beyond its front line useful life. Capital	$1,555,400	
2023	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$222,200	
2024	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	$227,200	

Priority	Div./Program	Description	Est. Cost	Next Year Ongoing Cost to Operating Budget
2024	Prevention Program	Add two (2) Fire Inspector 1 positions based on growth within the community. Personnel Operation & Maintenance Light Vehicle Total	 $203,323 22,720 68,160 $294,203	 $226,129
		Fiscal Years 2023 - 2024 SUBTOTAL	**$2,299,003**	
2025	Suppression Program	Replace one (1) aerial ladder truck which is beyond its front line useful life. Capital	 $1,626,100	
2025	Suppression Program	Replace one (1) fire engine which is beyond its front line useful life. Capital	 $929,200	
2025	Suppression Program	Replace six (6) rapid response units which are beyond their front line useful lives. Capital	 $1,811,940	
2025	Suppression Program	Replace one (1) rapid response reserve unit which is beyond its useful life. Capital	 $301,990	
2025	Suppression Program	Provide annual funding for station repair and maintenance projects. Operation & Maintenance	 $232,300	
2025	EMS Program	Replace eighteen (18) outdated defibrillator machines with current County of Fresno approved model. Operation & Maintenance	 $143,136	
		Fiscal Year 2025 SUBTOTAL	**$5,044,666**	
		Personnel Operation & Maintenance Light Vehicle Capital FISCAL YEARS 2020 - 2025 SUBTOTAL	$ 203,323 1,311,188 68,160 9,125,430 $10,708,101	 $226,129
		GRAND TOTALS:	**$134,511,299**	**$33,072,662**

ENDNOTES

1. 2000/2001 Fresno County Grand Jury Final Report, Page 65, Paragraph C.

2. 2001 Edition, NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, Chapter 4, Section 4.1.2.1.1.

3. Mayor's Council of Economic Advisors Task Force Report, Page 46

4. Ibid, Executive Summary, Page 6, Graph 7.

5. Ibid, Page 48.

6. Occupational Safety and Health Association (OSHA), Article 29, California Code of Federal Regulations, Section 1910.

7. Western City, League of California Cities, Page 9.

8. Mayor's Council of Economic Advisors Task Force Report, Page 41

9. City of Fresno 2025 General Plan, Chapter 2, Page 8.

10. City of Fresno Municipal Code, Article 4.5, Page 440.194-1, 440-195.

11. 2001 Edition, NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, Chapter 4, Section 4.1.2.1.1.

12. Macias Consulting Group Ltd., Final Report, Recommendation # 6.5.